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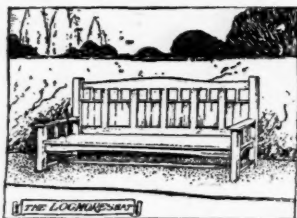
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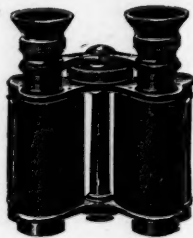
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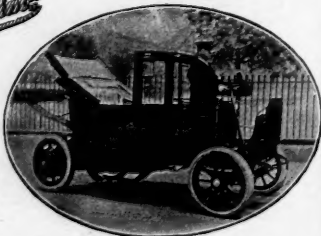
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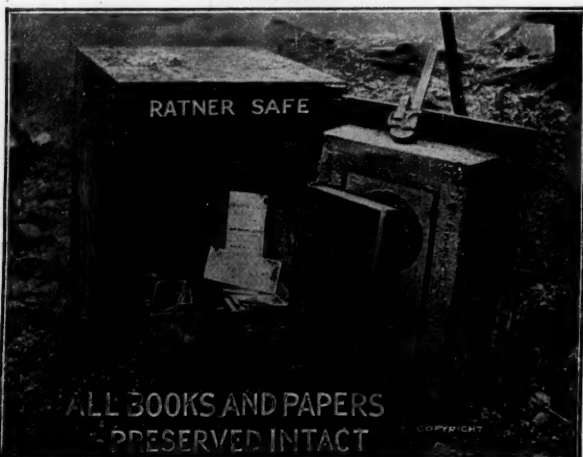
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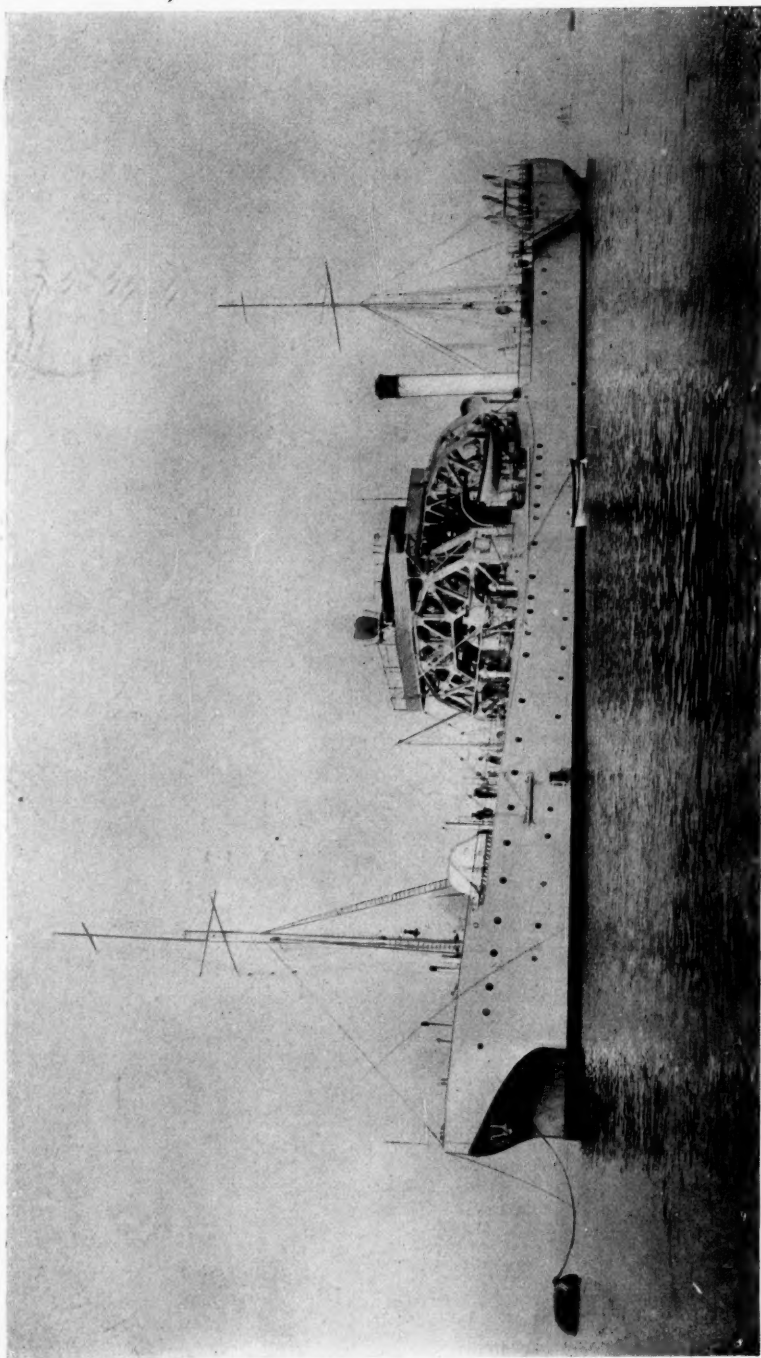
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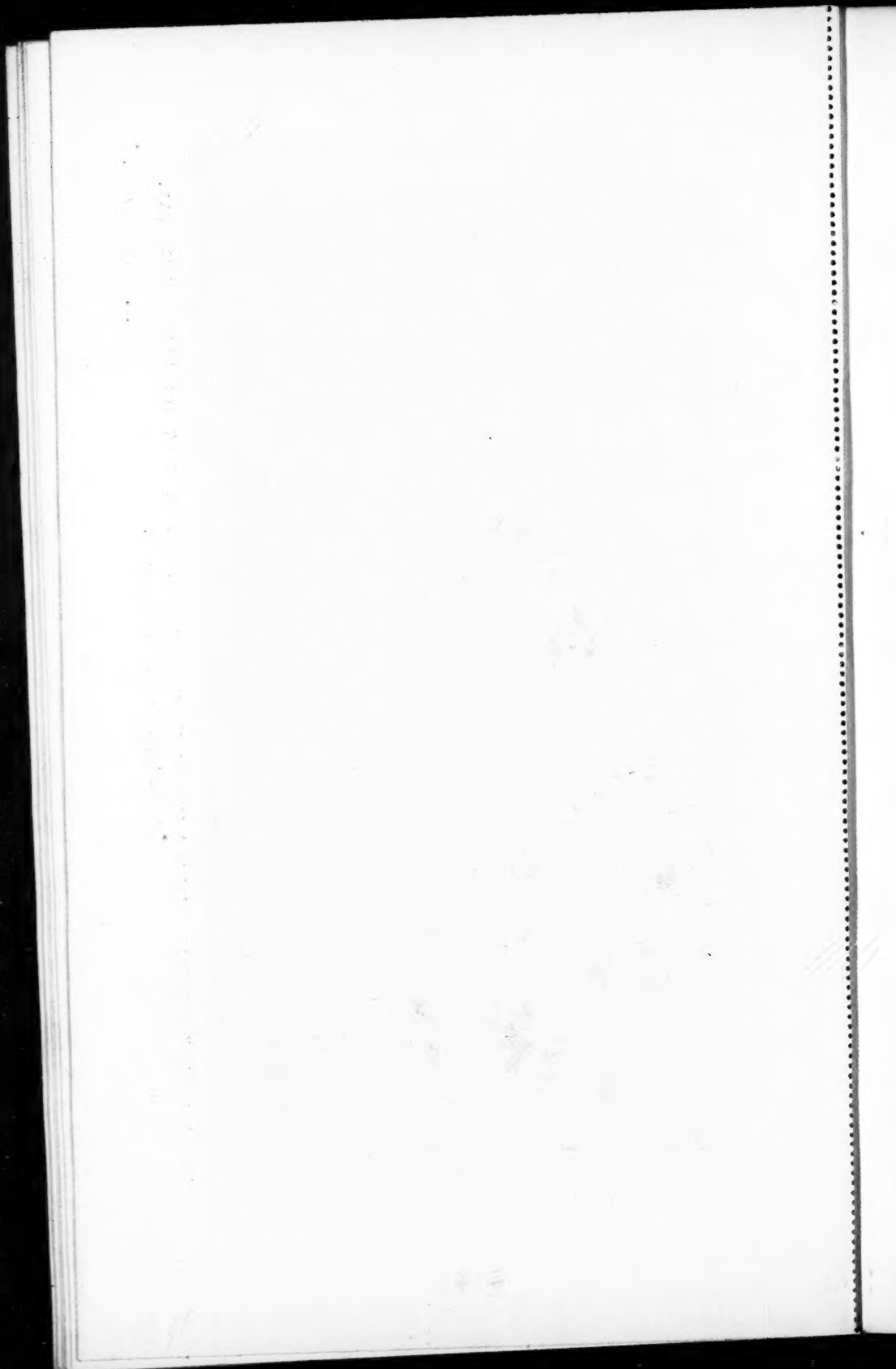




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*For particulars see Naval Notes, page 530.*

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# THE JOURNAL

OF THE

## ROYAL UNITED SERVICE INSTITUTION.

VOL. LIII.

APRIL, 1909.

No. 374.

*[Authors alone are responsible for the contents of their respective Papers.]*

### SECRETARY'S NOTES.

#### I. CHAIRMAN OF COUNCIL.

Lieut.-General H. D. Hutchinson, C.S.I., has been appointed Chairman of the Council for the year 1909-10.

#### II. VICE-CHAIRMAN OF COUNCIL.

Admiral-of-the-Fleet Sir G. H. U. Noel, K.C.B., K.C.M.G., has been appointed Vice-Chairman of the Council for the year 1909-10.

#### III. COMMITTEES.

Colonel Lord Bingham has been appointed a Member of the Museum Committee, otherwise the constitution of the Committees remains the same as in the past year.

#### IV. EXTRA LECTURES.

The following Extra Lectures will be delivered during May :—

Wednesday, 5th May.—“Readiness or Ruin,” by Dr. T. Miller Maguire.

Thursday, 20th May.—“Sir John Moore: The Story of a Patriot Soldier's Life,” by Colonel E. Macartney-Filgate.

Wednesday, 26th May.—“National Recuperation,” by Dr. T. Miller Maguire.

The names of the Chairmen will be announced in due course.

#### V. MILITARY HISTORY LECTURES.

A course of eight Lectures in Military History on “The Franco-Prussian War in 1870, from 15th July to 18th August inclusive,” set for

the May Army Promotion Examination, will be given on the following dates, at 4 p.m., the lecturer being Mr. J. H. Anderson, F.R. Hist. Soc., Barrister-at-Law :—Tuesday, 20th April; Friday, 23rd April; Tuesday, 27th April; Friday, 30th April; Tuesday, 4th May; Thursday, 6th May; Tuesday, 11th May; and Friday, 14th May.

The fee for the course of Lectures is one guinea for members of the Institution and two guineas for non-members.

## VI. OFFICERS JOINED.

The following Officers joined the Institution during the month of March :—

Captain T. G. Tulloch, late R.A.  
Lieutenant H. T. Cock, 3rd Battalion Yorkshire Light Infantry.  
Captain Hon. C. H. S. Monck, Coldstream Guards.  
Midshipman H. R. Bennett, R.N.  
Captain J. Knowles, 15th Hussars.  
Lieutenant E. Manners, R.N.  
C. E. Wurtzburg, Esq., late Lieutenant, 7th West Riding V.R.  
Major R. R. Gubbins, D.S.O., K. O. Shropshire Light Infantry.  
Lieutenant A. G. Stone, Indian Army.  
Lieutenant E. D. Ridley, Grenadier Guards.  
Lieutenant J. Sterndale-Bennett, Indian Army.  
Lieutenant H. V. R. Hodson, North Staffordshire Regiment.  
Second-Lieutenant W. E. Hope, Irish Guards.  
Second-Lieutenant W. S. Pilcher, Grenadier Guards.  
Second-Lieutenant E. M. W. Sealy, R.E.  
Lieutenant L. S. Lloyd, 3rd Battalion Royal Welsh Fusiliers.  
Admiral Sir A. L. Douglas, G.C.V.O., K.C.B.  
Second-Lieutenant A. W. J. J. Douglas-Dick, Scots Guards.  
Second-Lieutenant Lord V. W. Paget, Royal Horse Guards.  
Second-Lieutenant O. Wakeman, Grenadier Guards.  
Second-Lieutenant Lord G. Wellesley, Grenadier Guards.  
Major E. R. A. Shearman, 10th Hussars.  
Lieutenant W. W. S. Cuninghame, 2nd Life Guards.  
Major J. H. Galbraith, 7th Battalion Highland Light Infantry.  
Major G. Brown, 7th Battalion Highland Light Infantry.  
Second-Lieutenant C. V. Simon, 18th Battalion the London Regiment.  
Captain B. H. Mathew-Lunnowe, 4th Dragoon Guards.

## VII. REGIMENTAL COLOURS.

The Secretary is prepared to arrange for repairs to Regimental Colours and Cavalry Standards, in service or otherwise, at the Institution. A very large number has already been received, and the repairs are executed at as small a cost as possible.

## VIII. MILITARY COSTUME PRINTS.

There is being formed in the Museum a collection of Colour Prints illustrative of the costume of the British Army from earliest times, and any contribution of similar engravings would be very acceptable.

## IX. CAP BADGES.

The collection of Cap Badges worn by Infantry Battalions previous to the year 1881, is still deficient of the following specimens:—4th, 21st, 26th, 33rd, 67th, 68th, 70th, 71st, 76th, 77th, 81st, 87th, and 104th Regiments.

## X. ADDITIONS TO THE MUSEUM.

- (3352) Diary of Major Lord Charles Somerset Manners, 10th Hussars, kept by him during the retreat to Coruña in 1809.

—Deposited by Captain C. G. Manners.

- (3353) The Standard of the Commonwealth, a Flag, which, until March, 1909, had been preserved in Chatham Dockyard, and represents the Standard used at the time of the Commonwealth. Though it has been asserted that this exhibit was the Flag actually flown by Admiral Blake, no corroboration of the statement can be found. The Flag is of red bunting, 20 feet long by 15 feet wide, and a large green wreath of laurel encircles two shields placed side by side in the centre. These shields are of the same dimensions, each being 8 feet deep and 5 feet across. One of them consists of a white field with the St. George's Cross of England; the other of a blue field with the Irish Harp in yellow.

The use of the Commonwealth Flag was discontinued after the Restoration. Pepys, in his "Diary," notes the change. Writing under date 13th May, 1660, he says:—"To the quarter-deck, at which the taylors and painters were at work, cutting out some pieces of yellow cloth in the fashion of a crown and C.R., and put it upon a fine sheet, and that into the Flag instead of the State's Arms, which after dinner was finished and set up."

—Deposited by The Lords Commissioners of the Admiralty.

- (954) Commission dated 27th August, 1803, and signed by King George III., appointing John Elliot, Esq., Lieut.-Colonel Commandant of the Westminster Volunteer Cavalry.—Given.
- (955) Commission dated 5th March, 1707, and signed by Queen Anne, appointing William Ince, Esq., a Captain in Lord Viscount Mountjoy's Regiment of Foot.—Given.
- (956) Seven Engravings, "England's Glory," published by E. W. Rayner, 1736, illustrating the following battles:—Blenheim, Oudenarde, and Malplaquet.—Given.
- (958) Letter dated "Lisburne, 6th March, 1689," signed by Marshal Schomberg, asking for additional guns for his Army.—Given.
- (959) Militia Certificate, dated 1826, for balloted men who provide substitutes. It refers to the Somersetshire Militia.—Given.
- (960) An order to the fleet, dated "Victory off Cadiz, 20th October, 1805," signed by Lord Nelson.—Given.
- (961) Autograph Letter of Lord Nelson, dated "Palermo, August 28th, 1799," to Captain George Hope, with reference to the presentation to that Officer of a diamond ring.—Given.
- (962) Autograph Letter of Brigadier-General John Nicholson, dated 13th July, 1857, referring to an attack on a party of rebels at Trimmu Ghaut, of whom over 300 were killed and wounded.—Given.



- (963) Two Engravings, printed in colours, of the Surrender of Seringapatam, 6th April, 1799.—*Purchased.*
- (964) A Panoramic Series of Sketches in Colours, depicting Bengal Troops on the line of march, executed by an Officer of that Army. Date about 1800.—*Given.*
- (965) Curious Print on Silk, showing the field of Waterloo and incidents in the battle.—*Purchased.*
- (986) Shoulder-Belt-Plate of the Royal Manx Fencibles, found behind the rafters of a cowshed in the Isle of Man. The Corps served in Ireland during the Rebellion of 1798.  
—*Deposited by His Excellency Colonel Lord Raglan, C.B.*
- (987) Ashanti Drum, taken from the Sacrifice Palace of King Prempeh, 21st January, 1896.—*Given by Walter L. Nickel, Esq.*
- (988) Regulation Bayonet, 1907 pattern.

—*Given by the Army Council.*

## GOLD MEDAL PRIZE ESSAY.

Subject:—

"THE COMMAND OF THE SEA: WHAT IS IT?"

By Major A. B. N. CHURCHILL, late R.A.

Motto:—

"Whomsoever Commands the Sea."

"Whomsoever commands the sea commands the trade;

"Whomsoever commands the trade of the world commands the

"riches of the world, and, consequently, the world itself."

—Sir Walter Raleigh.

### PART I.

#### INTRODUCTION.

THE subject of our present study is an investigation of the meaning of a phrase, which, though accepted as a commonplace, is of the deepest strategical import to the naval officer, and of vital moment to every citizen of the British Empire.

Our subject is not concerned with some new growth which has its birth in those momentous changes and developments which for all time will mark the dawn of the 20th century. It is one which has for centuries aroused the lively interest of the British nation. Two centuries have passed away since a singularly able diplomatist, the founder of one of England's most illustrious noble families, though himself foreign in race and education, thus, in the words of Macaulay, defined the mind of Englishmen at a critical period of their history:—"The sea was their element. Traffic by the sea the great source of their wealth; ascendancy on the sea the great object of their ambition."<sup>1</sup> These words truly describe that sentiment which for upwards of one hundred years prior to this period had actuated the nation, and which, in spite of varying vicissitudes, has, during the intervening ages to the present day, inspired its action. In these sentences stand revealed the origin, the source of greatness, and the road to power of the British Empire.

<sup>1</sup> Macaulay, "History of England," Vol. V., Chapter XXIII.

Why, it may be asked, is an enquiry into a matter of such recognised national importance needed at the present time? Are strategists at variance with respect to the principles involved in command of the sea; is the nation indifferent to that which constitutes sea power? Has time changed the elements of national greatness, or science revolutionised the fundamental principles of naval warfare? In no case will the answers to such questions be found to furnish a satisfactory explanation. It is true that criticism on naval administration, in all its branches, is unusually rife at the present time; while controversies between experts and rival schools of thought are fresh in the minds of all students of current naval literature.

Still, in spite of this, it is equally undeniable that the nation has never evinced a livelier interest in naval matters than in present and recent years; that it has never been better served in the matter of instruction and literature on this engrossing subject than now; while whatever controversy exists among experts, there is a singular unanimity amongst them as to the cardinal principles of naval strategy. Under normal conditions there is nothing in the state of expert or public opinion with respect to naval matters which need arrest attention. The truth, however, is, that conditions are not normal, the times are not ordinary; consequently, the criticisms and controversies, which have been referred to, have excited an unrest and begotten a feeling of interest which, under other circumstances, would not have been aroused.

The present time brings the British people face to face with navies yearly increasing in power—face to face with an empire born of perseverance, resolution, and heroism, during long years of toil and hardship, which, emerging a victor from bloody struggles, has grown and prospered with amazing rapidity in the years of peace which have supervened. First among the military Powers of Europe, Germany has built up an over-sea commerce, is building up over-sea possessions, and for their security is building up a navy which is to be ready to meet all comers.

There is no nation which should be more whole-hearted in its admiration of Germany than the British. The expansion of Germany is developing on lines familiar to every Briton who knows the history of his country. But the knowledge which commands his admiration for his neighbour, claims his attention to his own interests. Whatever the ultimate issue may be, whether peaceful or otherwise, the fact remains that at the present time the rivalry between Greater Britain and Germany, due to the entrance of the latter into the arena as a competitor for over-sea commerce, constitutes one of the most important and disturbing questions in the diplomatic world.

The time is, therefore, a specially fitting one for a consideration of those elements and conditions which find expression in the term "Command of the Sea"—an expression rightly regarded by the nation as defining the source of its past, present,

and future weal. However changeless fundamental principles may be, they present themselves in varying guises in different ages, and, therefore, are often unrecognised at the time. It is necessary, therefore, to examine critically present conditions, to analyse the various factors involved, and thus make provision to meet the demands that the future will make. To this end we necessarily turn to the past; the study of the past is the most certain guide to a correct discernment of the future. If it is possible to trace the development of the subject of our study from its early growth, and follow throughout the workings and influences of the constituent elements in their varying and progressive stages, it becomes possible to arrive at a clear conception of present conditions, and to look into the immediate future with assurance.

It is obvious that the historical study here foreshadowed labours under two serious disadvantages. In the first place space forbids that exhaustive treatment which such a subject deserves; while, in the second place, in a partial study of history, there is always a danger that the sense of proportion will be lost, and that erroneous deductions will be drawn due to such distortion. On the other hand, these defects are, in the present instance, more apparent than real, because our subject is not a new one, there is no new ground to break, the soil is well prepared, the land-marks are clear. The task which lies before us is to marshal the facts of the past, which the researches of historians have disclosed, and comparing the records of the past with present conditions, make such deductions as are possible with respect to the future.

Before, however, starting on our course, it is very important that a clear understanding should be arrived at as to what war is. This may at first sight appear a strange statement, but it is because views are so often faulty in this respect that erroneous doctrines in connection with war are so often preached, and ever find ready adherents, as will in the sequel be seen. It is because war lies at the very root of the command of the sea that it is necessary to lay great stress on the importance of realising the true nature of war. It is only by a correct conception of war, that the varying elements and forces which created the history of the past can be accurately and truthfully disclosed to view.

#### WAR.

The greatest writer on war has defined it as:—"An act of violence to compel our opponent to fulfil our will;" that "violence arms itself with the inventions of art and science in order to contend against violence."

The words quoted must be accepted in their entirety and without reservation. It is because this is not always done that

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<sup>1</sup> Clausewitz on War, Book I., para. 2.

false theories spread so readily. One example will suffice to prove the importance of the point here urged, namely, the proposal to exempt from capture, private property (so called) on the sea in time of war. It is a subject to which attention will be directed later on, and need not, therefore, be further alluded to here. It is further to be noted that various methods can be employed by one belligerent on another, from which arises the great diversity in the conduct of war which is one of its most prominent characteristics. The means employed must be adequate to the ends in view; as the interests at stake vary so will the degree of effort made vary. It is necessary to note such variations in order to discern primary from secondary issues.

It is clear that it is only when war is viewed in its supreme aspect, that is where the stake fought for is national existence, will be seen portrayed "that violence which knows no bounds."

The methods adopted by the belligerents in war can be grouped under one or other of the following three categories:—Seizure of territory, exhaustion of the adversary, annihilation. The last named does not come within the province of civilised warfare; the other two methods may be operative concurrently or not, but where the belligerents are equally matched, exhaustion is the most prominent. Exhaustion, as will be seen, can be brought about by the exhaustion of the fighting strength; it was to such a form of exhaustion Napoleon eventually succumbed. Exhaustion is also brought about by the impoverishment of the nation, due to loss of wealth and the poverty and misery which consequently overtakes all sections of the population. To such exhaustion Holland succumbed, in spite of the triumph of her armed forces; to such exhaustion Napoleon sought to reduce Great Britain, and it seems as if it were forgotten how nearly he succeeded in accomplishing his object.

It is self-evident, therefore, that the belligerent who can make war feed war, secures a preponderating advantage over an adversary not so circumstanced. The point is often overlooked that this factor had long since been lost sight of in land warfare. It was Napoleon who recognised the potentiality which lay dormant, and imposed those conditions on the conduct of war, which would enable him to reap the fullest advantage from it.

"The French Revolution annihilated at a single blow the scrupulous hesitation to make war feed war, to annul civil rights when the cannons roar, and to live from the country in which the campaign takes place."<sup>1</sup>

It is interesting and all important to note the difference which exists between naval warfare and land warfare in this respect. Successful naval warfare has, it will be seen, always fed war. It is a fact which cannot be too strongly insisted on.

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<sup>1</sup> "Nation in Arms," Von der Goltz, p. 11.



## THE DAWN OF SEA POWER.

*The Foundations of a Navy.*

The 16th century witnessed the substitution of sails for oars, and the birth of that maritime activity which resulting therefrom has ever since increased and developed. The nations who were to reap the fruit of this revolution were not the foremost of the world, but peoples who, up to this period, possessed no European influence worth mentioning. The history of the sea power which supervenes is the story of the growth of the Dutch and English Navies, and the rise of these two nations as European Powers.

In this story can be traced in their simplest forms the cardinal principles of sea power.

First and foremost, in both cases, the source from which the navy arose is clear, undisputed, and identical. The navies of England and Holland were both called into existence for the protection of their over-sea commerce, and the capture of that of their enemies. These navies sprang from sea trade, and in their earliest days had no other concern but with reference to such trade. The state of Western Europe during this period was one of the greatest unrest; religious strife and the rivalry of Royal Houses, plunged all nations and communities in civil and foreign wars. All countries were under the rule of the rack or the sword. The powerful nations oppressed the weaker, yet it was the weak who emerged from the struggle as conquerors, and the poor who became the rich.

The case of Holland is the more striking. "Born on the grave of liberty," after eighty years of war with Spain, in spite of religious persecution directed by the iron hand of Alva, the United Provinces emerged triumphant, a prosperous republic.

The fishermen of the North Sea—the "beggars of the ocean"—had become the over-sea carriers of Europe, and enriched by their commerce, had developed into a wealthy nation. It is important to notice that the early steps towards sea power were inspired and fostered by William the Silent; he it was who realised that impotent as his countrymen were to make headway against the oppressor on land, they could, by the sea, inflict deadly wounds on him.<sup>1</sup> The sentiments which actuated the Dutch were identical with those which influenced English sailors, and which have been put forward as probably impelling Drake on his renowned career.<sup>2</sup> Both England and Holland made war on Spain, the common enemy, by attacking her over-sea commerce. The enterprise proved extremely profitable, private persons engaged in it, the capture of overseas commerce became part of the business of merchants.

In England, when the enterprise was of sufficient magnitude, the State is seen taking part in it: surreptitiously in peace,

<sup>1</sup> Motley, "Rise of the Dutch Republic," p. 449.

<sup>2</sup> "Drake and the Tudor Navy," Vol. I., p. 73.

openly in war. Merchant ships are equipped for the purpose of trading and fighting. The warships of the State are directly associated with and reinforced by merchant ships in war-like operations. As oversea commerce grows, so grows, too, the need for protection, and the need for warships, or a navy becomes more pronounced. With the growth of the navy, its war training naturally developed in like measure. Here in the early days of the Dutch and English sea power is to be noted the dependence of the navy on commerce, and the fact that successful warfare on the sea was profitable; war on the sea not only fed war, but gave a handsome profit besides. In spite of most unfavourable conditions on land, the United Provinces by the sea developed into a rich and powerful nation, as it were, under the sword. ". . . Holland made her fortune in the world by a war of some eighty years with Spain. How was this? It was because war threw open to her attack the whole boundless possessions of her antagonist in the New World, which would have been closed to her in peace. By conquest she made for herself an empire, and this empire made her rich."<sup>1</sup>

#### OVERSEA POSSESSIONS AND SEA COMMERCE.

A natural but a special feature of this oversea trade, and its expansion, must never be lost sight of. The natural result of oversea trade was the formation of settlements beyond the seas; religious persecution fostered this movement in two important particulars: it encouraged men to leave their homes to seek their fortunes beyond the seas, and peopled such settlements with men of vigorous, resourceful, and independent temperament. Far different were the conditions, aims, and objects of the Spanish settlements compared with those formed by the English and the Dutch. These settlements, as they grew and prospered, materially increased the volume of traffic across the sea. Merchants found it more profitable to engage in peaceful commercial intercourse with their countrymen across the sea than to engage in predatory raids on the treasure fleets of their neighbours. Settlements over the sea directly affect oversea commerce.

Such, briefly, were the outlines of the growth of sea power from the time that sails supplemented oars till the close of the 16th century, at which time the naval power of both the Dutch and English had definitely asserted itself on the ocean, and had become a factor with which European Statesmen had to reckon.

#### THE POLITICAL ASPECT OF SEA POWER.

The state of European politics at the opening of the 17th century had long been, and for long years afterwards, was destined to be exceedingly complex. In the forefront is the

<sup>1</sup>Seeley, "Expansion of England," Lecture VI., p. 112.

religious question which, uniting the more powerful Catholic nations against the weaker but more vigorous Northern races, at the same time convulses Catholic and Protestant countries with internecine strife. Secondly, but no less potent, come the rivalries connected with the House of Hapsburg, which at one time was a source of quarrel between the Catholic nations themselves, and at another threatened to crush the weaker Catholic States. Thirdly, remained that cause which once had united all Christian nations in a common brotherhood, and which always would command their sympathies; the quarrel of the west against the east, of Christendom against the Infidel.

Midst such a tangled mesh of political interests, rendered still more complex by the subtle diplomacy of statecraft, was sea power developed, and its forces exhibited during the first half of the 17th century. At one time Catholic Venetia claims the aid of English and Dutch squadrons to protect her from Catholic Spain. At another, Richlieu courts the friendship of both the Dutch and the English to obtain the loan of their ships; and Gustavus Adolphus seeks the aid of the English sea power.

Spain's great captain, Orsuna, learns in the English School, and Richlieu models the French Navy he would create, on the English model. Mazarin, too, in his turn, pays court to England's sea power. Everywhere the value of sea power is demonstrated, and it is seen that its possessors have a "political asset of undoubted power." This feature of sea power is still more pronounced during the latter half of the century. It is sea power which forces Spain, then France, to recognise the Commonwealth.

Under Cromwell's astute statesmanship, England's aid is conditional on obtaining solid advantages in return; if Spain is to be aided against France, Calais is to be England's spoil; if England helps France against Spain, Dunkirk is to be England's reward. Portugal, to save herself from Spain, seeks the protection of England, and is prepared to pay heavily for it; Tangiers and Bombay, together with a large sum of money, is the price paid. Venetia is seen to again renew her appeal for protection. Thus strikingly throughout this century is the political power conferred by sea power exemplified.<sup>1</sup>

The connection of oversea commerce with the events here referred to must never be lost sight of. Both the Dutch and the English had established a flourishing trade in the Levant. This trade had to be protected from the Barbary pirates. It was a necessity to such trade that Dutch and English squadrons should enter the Mediterranean for its protection. It was the dissensions of their hereditary enemies which not only attracted their squadrons to the Mediterranean, but, what is more important, provided them with friendly ports which made it possible for the ships to keep the seas. Amid the confusing political considerations, which so often obscure the real intentions of naval move-

<sup>1</sup> Corbett, "England in the Mediterranean," Vol. I., pp. 280, 296; Vol. II., p. 5.

ments in the Mediterranean, the claims of the Levant trade are always clearly discernible. Not once but frequently the protection of the trade from the Barbary pirates is used to explain the presence of a squadron while veiling its true objective. Again, war by the sea feeds war; war is found to be profitable.

In this political aspect of sea power, the existence of an all-important condition remains to be considered. The overtures and appeals to the Northern Sea Powers for support are made on the assumption, which amounted to a certainty, that the presence of the squadrons would obtain the object in view, and that these squadrons would, save for stress of weather, arrive in the seas where their presence was required, and proceed to the execution of their projects without let or hindrance. Neither France nor Spain were a match on the sea for the Dutch and the English. The Northern Sea Powers commanded the sea and controlled the traffic thereon, and it was consequent to that condition, and conditional on it, that this political influence of sea power became operative. The situation is wholly changed when this control is disputable. Such a situation arose in the middle of the century with the first Dutch war, which now claims our attention.

Before, however, proceeding further, it is convenient to here draw attention to two important features distinctive of the sea and navigation at this time. First, the natural necessity of ports to shipping, to enable ships to obtain supplies and to refit, which obtains in equal force now as formerly. Secondly, the inability of ships to keep the seas during the winter or hurricane season; this feature has passed away, but it continued in force till the end of the 18th century. Both the English and the Dutch, from their earliest days in the Mediterranean, found themselves hampered and crippled for want of ports where they could water and careen; while, on the other hand, their operations were saddled with a time limit, the squadron had to reach home waters before the winter gales set in, under risk of destruction.

#### THE DUTCH WARS.

##### *Contest for Command of the Sea.*

We have now reached that interesting period of the history of sea power which witnesses the two young naval Powers engage in war with each other, and till the close of the century war follows war. If any bonds of mutual interest could bind two nations in fraternal union, save monetary considerations, England and Holland should, at the time in question, have been thus united. The hereditary enemies of the one were the hereditary enemies of the other. The religious cause of the one was that of the other; and both, to the indignation of Europe, had espoused a similar form of Government. Why should the Commonwealth plunge into war with the Republic after long years of successful and glorious resistance to a common foe? What is the explanation of the striking scenes so shortly to be

witnessed in the Mediterranean, when Dutch and Spanish ships are opposed to those of England and France, or in the Channel of English and French fleets combining to crush the Dutch Republic? However complex the political interests were; however tortuous and covert the methods of diplomacy, the ruling cause throughout is unmistakable, the rivalry between the Dutch and English with respect to oversea commerce, in other words, the struggle for "ascendency on the sea." This was the immediate cause of the first war and the second war, and the only factor in the third war which reconciled the English nation to it. "War fosters trade."<sup>1</sup> It was William the Silent who was at pains to foster Dutch sea commerce; with similar intent England imposed her Navigation Laws, and these led to war.

Preceding the outbreak of war two most important changes of far-reaching effect had taken place in English sea policy. The navy had been drastically reformed from within, and an efficient organisation and war training had been introduced; resulting therefrom, and reinforced by experience, the necessity of separating the fighting element from the commercial element and rendering each relatively independent of each other was recognised.

Henceforward the navy was to become a service distinct from the Mercantile Marine; the armed merchantman was to disappear from fleets and squadrons. The mutual dependence remained not only unimpaired, but was more pronounced than ever. The change was introduced to enable the fighting element to more efficiently protect the trading element of sea power; the principle that the navy existed to protect trade was more firmly established than ever.<sup>2</sup> The English Navy was, therefore, well circumstanced to try conclusions with its formidable rival. However faulty the organisation of the Dutch Navy may have been, the fact remains that the fleet had not been reduced to a peace footing on the conclusion of the Thirty Years' War; and since that period it had been considerably augmented. If the preparation of the Dutch for war left much to be desired, they were nevertheless a formidable foe; the two vigorous rivals were well matched to contest the sovereignty of the seas.<sup>3</sup>

In following the incidents of the struggle, three clearly defined areas come under notice: the West Indies, the Mediterranean, and the Channel and North Sea; that is to say, the sources of eversea commerce and its trade routes in distant and in home waters. The West Indies played a part in those events which led up to the outbreak of war, but do not figure prominently during the struggle. In the Mediterranean, England is defeated, and her squadron driven from those seas;<sup>4</sup> the decisive naval actions all take place in the Channel or the

<sup>1</sup> c.f., Seeley, "Expansion of England," p. 110.

<sup>2</sup> Corbett, "England in the Mediterranean," Vol. I., pp. 225, 226.

<sup>3</sup> "England in the Mediterranean," Vol. I., p. 239. "History of Commonwealth and Protectorate," Chapter XXII., Vol. II., p. 115.

<sup>4</sup> "England in the Mediterranean," Vol. I., p. 267.



North Sea, in fact the story of the war is centred in the struggle first for the Channel and then for the North Sea.<sup>1</sup> In the naval actions which take place in home waters, four take place in the Channel and three in the North Sea. If Ayscue's action with De Ruyter is taken as indecisive, then, with the exception of Blake's defeat by Tromp off Dungeness, victory on all other occasions rested with the English. In connection with these battles certain facts and influences stand out prominently as affecting the greater issues at stake.

In the Mediterranean, the English were in inferior force, and their squadron was placed in difficult circumstances with respect to ports, while the Dutch, on the other hand, had the free use of French ports. The critical condition of the Mediterranean squadron, the natural impotency of the Levant merchants, made the Council of State particularly anxious to reinforce that squadron.

A squadron of twenty sail was ordered to the Straits. Blake, who had just won a great victory, expostulated in vain. The result was, that he was shortly afterwards overmatched and defeated by Tromp at Dungeness.<sup>2</sup> Tromp, returning from Bordeaux with his convoy, is in turn attacked and defeated off Portland.

Again, the project to reinforce the Mediterranean squadron at the expense of the fleet in home waters is seriously entertained. Again, the admirals oppose, pointing out that the squadron destined for the Mediterranean "could be employed to greater advantage by cruising in touch with themselves in the mouth of the Channel to intercept the Holland trade"; and again they expostulated in vain. Fortunately the decision of the Council of State was not carried out, and the ships were thus available to augment the home fleet and to take part in the battle off the North Foreland.<sup>3</sup> The point is an important one: Monk, with 115 sail, of which five were fire ships, engaged Tromp with 104 ships, of which six were fire ships. In spite of the superiority of the English ships to those of the Dutch, a diminution of Monk's strength by a Mediterranean squadron might well have made all the difference in the issue of that great battle. The Mediterranean was thenceforth abandoned, and the fleet in the Channel maintained at its greatest strength, and in the final battle of the Texel, the victory rested with England. The Dutch sea power was not crushed, but the spoils of war lay with England as the terms of peace clearly show. Lastly, it is to be noted that England brought her adversary under compulsion by the direct attack of her oversea commerce, and this was carried into effect by securing the command of the Channel and the North Sea by defeating the hostile fleets. The objective

<sup>1</sup> "History of Commonwealth and Protectorate," Vol. II., Chapters XXIII. and XXX.

<sup>2</sup> "England in the Mediterranean," Vol. I., p. 258.

<sup>3</sup> *Ibid.* pp. 269, 270.



of the war was exhaustion, by the destruction of oversea commerce; the strategy pursued was to secure the command of the trade route at its most important points—that is, the command of those seas by which alone it could reach the home ports. The objective and the strategy are simple, direct, and effective. If the means are realised, the end in view is assured.

#### *The Second Dutch War.*

Some ten years after the conclusion of peace the second war broke out, due to the same cause. The situation in the meantime had undergone important changes. Cromwell, after menacing and intriguing with France and Spain in turn, had ended in carrying on a war with Spain by which the influence of England in the Mediterranean had been restored, and Jamaica had passed to England. Portugal had sought the protection of England's fleet, and Tangiers and Bombay were in English hands.

Louis XIV., who had joined in the war, had not failed to reap advantages therefrom; but he saw England more firmly established in the Mediterranean than ever, and in possession of a port commanding the entrance to it.

In its leading features, the second war was similar to the first, but there are important differences to note. Operations are centred in the Mediterranean and in the home waters; and at the opening of the struggle it would seem that the objective and the strategy would be the same as those adopted in the first war.

The first battle took place off Lowestoft, on the 13th June, 1665, and with the defeat of the Dutch a third competitor enters the arena, and Louis XIV. joined the United Provinces to assist them in their contest for supremacy on the seas. Two battles in 1666, one of which (the Four Days' battle) a success for the Dutch, and the other (off the North Foreland) a success for the English, followed a year later by De Ruyter's raid up the Thames, comprised the operations in home waters. In the Mediterranean no great battle takes place, but the naval operations are, nevertheless, most instructive, and in the result England retains her hold on this sea. With respect to Holland, the objective of England is the same as in the former war, and the strategy by which the objective is to be secured is also the same; but with the entrance of France into the struggle a complex factor is introduced. France interfered with the object of checking England's supremacy on the seas; to attain this end it was necessary that her fleet should act in concert with that of Holland, but she had also to protect her interests in the Mediterranean. In the Mediterranean, with the possession of Tangiers and the more than friendly neutrality of Spain, England was strongly posted, and with a squadron under Sir Jeremy Smith interposed at Cadiz between Brest and Toulon, the possibility of French succour to the Dutch was

seriously jeopardised. It is necessary also to bear in mind those interests which naturally operated to bind England and Holland together. These interests, though insufficient to prevent war between the two rival Sea Powers, were very real. The first war, though popular in England, had never been to the liking of Cromwell personally, and now that France had joined issue, these mutual interests acquired a force which had not been previously experienced. Lastly is to be noted those interests which were common to Charles II. and Louis XIV., and which later were destined to play such an important part in the history of their respective countries. It will be seen, therefore, that the political and the strategical situations were complicated, and not so simple and direct as in the first war. Still, the objective and the strategy, in spite of all conflicting considerations resolved itself, as in the first war, to strangling the Dutch oversea commerce by securing the command of the home waters. From the point of view of our study, the two interesting points in the war to note are, first, the adherence of England to the strategy adopted in the first war, namely, concentration of strength in the Channel, even to the abandonment of the Mediterranean for the time being; secondly, the departure from that strategy by Charles II. after the victory off the North Foreland for that form of strategy known as commerce destroying. The recall of Sir Jeremy Smith's fleet from the Mediterranean has been adversely criticised; but whatever views are held on the subject, there can be no difference of opinion with respect to the end in view. Any difference of opinion is restricted simply to the consideration of the best means to attain that end. The object was to concentrate at the decisive point and neutralise directly the attempt of Louis XIV. to follow the same golden principle of strategy. The English leaders sought to realise their object directly by recalling their Mediterranean squadron. They thus jeopardised their interests and possessions in the Mediterranean and its vicinity, and left French interests there unthreatened; but they secured the end in view. It may be that other measures, if skilfully carried out, would have secured the same result without attending risks. The problem is a strategical one, despite the political and commercial interests involved, and the point to grasp is that this is a problem for the sailor and the naval strategist to solve, and not the statesman. The strategical stroke was rendered futile by the tactics adopted; when the day of battle came, it found the English fleet disseminated in place of being concentrated, and the result was defeat. In spite of the heavy losses sustained, it is instructive to note that the English fleet was at sea again within two months, when it signally defeated the Dutch off the North Foreland, and followed this up by a destructive raid on the Dutch coast.

But now a new departure in England's naval strategy is to be noted; in place of destroying oversea commerce by establishing control over the trade routes by the operation of fleets

at the "focal points," commerce is to be destroyed by organising frigates to prey on merchant shipping. This form of strategy is termed "commerce destroying"—a great misnomer, for it is precisely this result which is not secured by the methods adopted. As has already been pointed out, the objective is exceptionally direct and effective; the fault rests in the strategy which does not secure the end in view. So far from destroying commerce, this form of strategy does nothing of the kind; the designation used is misleading, and that adopted by the French is much to be preferred. To grasp clearly the true essentials involved, it is necessary to go back to first principles. National exhaustion is the objective; this is to be effected by "breaking down the money power" of the nation, and thus ruining industries and spreading financial distress throughout all sections of the community. This state of affairs will be produced among a maritime people if their oversea commerce is interrupted; the degree of distress, that is the compelling factor, is directly proportional to the degree of interruption produced. Where oversea trade is completely intercepted, the factor of compulsion rises to a maximum. It follows from the nature of things that the *guerre de course*, fascinating as it appears in theory, can never be prosecuted with that directness, certainty of aim and vigour, which are possible in the case of fleet action. The *guerre de course* is in reality a half measure, and the results attending its prosecution are partial, and never in themselves complete. It is a cheap method of making war, and to all but those who probe to the root of matters specious; hence adherents to its doctrines are always to be found. The subject is forcibly summarised by Mahan in the following words:—

"It is not the taking of individual ships or convoys—be they few or many—that strikes down the money power of a nation; it is the possession of that overbearing power on the sea which drives the enemy's flag from it, or allows it to appear only as a fugitive; and which, by controlling the great common, closes the highways by which commerce moves to and from the enemy's shores."<sup>1</sup>

With the reduction of warships which followed the new policy, the Dutch were able a year later to carry out their memorable raid up the Thames.

#### *The Mediterranean.*

As has been already observed, with the recall of Sir Jeremy Smith's squadron, the Mediterranean was abandoned by the Navy. English prestige and interests, though, as before said, jeopardised, did not in the sequel suffer. This result was wholly due to the possession by England of Tangiers.<sup>2</sup>

<sup>1</sup> "Influence of Sea Power on History," p. 138.

<sup>2</sup> "England in the Mediterranean," Vol. II., p. 62.

It was this port which served as a refuge to merchant ships, which defiantly challenged the attack of the enemies' ships, and only needed the presence of her own squadrons to change defiance into menace. Well equipped and garrisoned, and prepared as it was to resist attack, Louis XIV. was not prepared "to risk his fleet for it." The part played by this port in the maintenance of British interests during the war is instructive, and its value as an adjunct, both for attack and defence, was clearly illustrated. As a naval station, Tangiers, however, possessed one serious defect—it had a land frontier, and therefore was liable to attack and capture by land. England experienced to the full the disadvantages of this defect, and it is interesting to note that in spite of all its naval advantages, the country was not prepared to incur the expense which experience had proved was essential to its maintenance and upkeep. Peace was declared in the summer of 1667, and the terms were "at the expense of Holland, for it left England in possession of the Dutch Colonies in America." Striking at the very source of oversea commerce, England had succeeded in inflicting a permanent wound on Holland to the direct advantage of her own trade.

#### *The Third Dutch War.*

This war differs from those which preceded it, in the fact that though the commercial rivalry between England and Holland was the factor which made war possible, it was a third party, Louis XIV., who used this factor to revive the war to serve his own ends. The sovereignty of the seas was not alone the prize of conquest, the United Provinces were to be destroyed, and England and France were to enter into an offensive alliance to effect this and share the spoils. Another important difference is, that the war was not wholly maritime; England in alliance with France is now seen to be making war on Holland by sea and land.

Hostilities opened in the spring of 1672, and during the two years that England took part in the struggle, four sea fights took place, all indecisive in their results, and in all of which the Dutch were in inferior strength.

The battle of Sole Bay, 7th June, 1672, the battles off Schoneveldt, 7th and 14th June, 1673, and the battle of Texel, 21st August of the same year. In the Mediterranean no action of any importance occurred, "England and France were far too strong at sea for the Dutch to attempt anything serious to the southward."

The great value of Tangiers, which had not yet been evacuated, was once more demonstrated. "The war," writes Corbett, "drove Mediterranean merchants, and French ones in particular, to use Tangiers more than ever, and thus served to

<sup>1</sup> "England in the Mediterranean," Vol. II., p. 60.

<sup>2</sup> *Ibid.*, p. 75.

give the place a prosperity it had never enjoyed before." "Tangiers," says a news letter of the time, "is likely to prove the richest port in those parts. During the war it has been the harbour for all European commodities, and may long continue so."<sup>1</sup>

The objective of the war as regards the allies was the extinction of the Republic, whose source of wealth, oversea commerce, was to be closed by sea power, while its territory was to be seized and occupied by land power. The objective of Holland was equally clear and simple: self-preservation by opposing to her utmost power the two-fold attack by land and by sea. In spite of her desperate plight, the United Provinces won.

"Holland," writes Mahan, "for whose destruction Louis began the war, lost not a foot of ground in Europe; and beyond the seas only her colonies on the west coast of Africa and in Guiana. She owed her safety at first, and the final successful issue, to her sea power."<sup>2</sup>

In this third Dutch war, we see an illustration of war in its extreme aspect; a nation struggling for existence against great odds. In defiance of apparently overwhelming odds, the Republic triumphs, and that because in its hour of peril it staked its all on the sea, "the mother of prosperity," and retained hold on it. Not when Turenne's troops were in the outskirts of Amsterdam did the courage of the Dutch falter or their vigour wane; in the depth of their distress they rose to the heights of heroism. Then were the dykes opened and the country flooded; but the fleet had, by the fight at Sole Bay, opened the road to the riches of the sea to reach the impoverished community. Thus, though in greatly inferior strength, by heroically waging by sea a defensive-offensive war, which only tactically yielded indecisive results, Holland maintained her hold on the sea—a precarious hold certainly, but sufficient to provide her with the sinews of war which enabled her to maintain her struggle, and without which she must have perished. "Nine days after the battle of Texel," the United Provinces concluded an alliance which materially improved her prospects, and with the withdrawal of England from the war early the following year, the command of the sea is no longer in question; fed and nourished by sea trade Holland and her allies steadfastly opposed the aims and ambition of Louis XIV.<sup>3</sup>

With this war the rivalry between England and Holland for the sovereignty of the seas came to a close. Henceforth, religious interests were to bind the two countries into a durable alliance. The champion of the United Provinces, soon to become King of England, was destined to exhibit even more forcibly than before the power conferred on that nation who holds the "Command of the Sea." But these three wars had

<sup>1</sup> "England in the Mediterranean," Vol. II., p. 81.

<sup>2</sup> "The Influence of Sea Power upon History," Mahan, pp. 168, 169.

<sup>3</sup> *Ibid.*, p. 158.



determined the question of rivalry for supremacy at sea between England and Holland, and settled it in the favour of England.

Commercial jealousies removed, religious interests once more resume their sway, and under a common leadership the two Northern Powers now unite against the common enemy, who now enters the scene as a challenger for supremacy on the seas.

In order to complete this portion of our study, it is now necessary to review the salient features of the war which brings to a close the 17th century, and that which occurred with the opening of the 18th century. With the war of the League of Augsburg, and that of the Spanish Succession, opened the great contest between France and England which continued to dominate the history of the next 100 years. In these wars the "Command of the Sea" is presented in new and striking aspects in the masterly combinations of William III. and Marlborough.

#### *The War of the League of Augsburg.*

The struggle was carried on by sea and by land, and at the commencement France appears on the seas in superior strength to the combined navies of England and Holland. Armed force, by sea or by land, is liable to striking variations, if the fighting elements from neglect, indifference, or any other cause, are impaired, and of the two the navy is the more sensitive, at least the baneful influences operate there with greater rapidity. It is a matter of supreme importance, and not once nor twice does history record the fact of a nation concluding a war supreme at sea, and a few years later, entering on a struggle in inferior strength, having lost in peace that "Command of the Sea" which it had obtained in the previous war by force of arms. In the struggle which England and Holland now enter on against France, the objectives are less clearly definable. Louis XIV. was engaged on a policy of aggrandisement which united all Europe against him. His schemes embraced extensive territorial conquests throughout the length of his eastern frontiers. He especially coveted the Spanish Netherlands, and the Mediterranean offered great prizes, could he grasp them. The power that opposed him was centred in the personality of William of Orange. In William of Orange lay the hope and salvation of England, and in Louis XIV. and his policy England recognised an implacable foe. When Louis gave William of Orange his opportunity to land in England, and England and Holland were united under the leadership of William III., the war which ensued became a contest between these two great personalities—William III. and Louis XIV. Mahan has pointed out that the true objective for Louis to prosecute was to neutralise England's forces, and cripple William's power by supporting the Jacobite cause.<sup>1</sup> That he did support it is an historic fact; but it was a secondary and not a primary objective of his great scheme. His chief energies were directed to the continental war and not to the

<sup>1</sup> "Influence of Sea Power upon History," p. 178, *et seq.*



destruction of William III. of England. Had he made James' cause his primary objective, his sea power placed him in a commanding position to secure his object. The opportunity was let slip, the English and the Dutch Navies increased in power during the war, the French Navy declined; the explanation of this notable fact is important. "It is," writes Mahan, "equally the nature of a military navy like that of France to be strongest at the beginning of hostilities; whereas that of the allied sea powers grew daily stronger, drawing upon the vast resources of their mercantile shipping and their wealth." And, again:—"That staying power, which has already been spoken of as distinctive of nations whose sea power is not a mere military institution, but based upon the character and pursuits of the people, had now come into play with the allies. Notwithstanding the defeat and loss off Beachy Head, the united fleets took the sea in 1691 with one hundred ships-of-the-line under the command of Admiral Russell. Tourville could only gather seventy-two, the same number as the year before."<sup>1</sup>

From this it becomes evident that Louis, when he had the Command of the Sea, did not reap the advantages this strategic condition gave him, because his objective was faulty, and he lost this same strategic condition on account of this misdirection, and on account of the fundamental difference existing in the foundations on which the hostile navies were reared. "It may be safely said that their misdirection" (the naval operations of France), "was the immediate cause of things turning out as they did, and the first cause of the decay of the French Navy."<sup>2</sup> The objective of the allies was by no means simple of discernment. William of Orange was beset with difficulties, the conduct of the continental war, and his own insecure position as King of England, were alone sufficient to tax his utmost energies; and it is, therefore, not surprising if at first he failed to recognise in sea power a potentiality which, up to this time, had not been demonstrated. But as his navies increased in power, and his hold on the crown became assured, with the eye of a great commander and statesman, he saw the weak point in his opponent's armour: he realised the power inherent in the Command of the Sea, and he decided on a true objective; and having so decided, concentrated all his energies towards its attainment without ever wavering in his purpose. "The Low countries were, therefore, the more absorbing factor, but the Mediterranean could not be for a moment forgotten. Here lay the main source of French wealth, and it was here, according to the side upon which the balance of sea power fell, lay the link or the barrier between the two Hapsburg powers. Here, too, was the channel by which England could strike into the heart of the strife with an overpowering hand."<sup>3</sup> If this was true of

<sup>1</sup> "Influence of Sea Power on History," pp. 180 and 187.

<sup>2</sup> *Ibid.*, p. 191.

<sup>3</sup> "England in the Mediterranean," Vol. II., p. 84, 145, 146.

the third Dutch war, it was equally true of the war of the League of Augsburg, but at the opening of the war the way was not open to William. With the victory of La Hague and the ascendancy on the sea secured, William fixed his eye on the Mediterranean and kept it there. "I am under great alarms," he said, "lest Admiral Russell should not receive my order to continue in the Mediterranean, and the more I consider that affair the more important it appears to me. I know, from the best authority, there is nothing France so much dreads."<sup>1</sup> He followed out this policy and adhered to it, in spite of great difficulties, which cannot be enumerated, but which in great measure sprang from the fact that England, having evacuated Tangiers, he had no port of his own in the Mediterranean. The important consideration is that William's objective struck at the wealth of France, so essential for the sustenance of those titanic efforts the war imposed on her, the strain thus became too great, and exhaustion supervened; and "the peace signed at Ryswick, in 1697, was most disadvantageous to France."<sup>2</sup> As noted in previous wars, so again here, war is found to feed war; yet trade and shipping not only bore the burden of suffering, but, in the main, paid the armies that were fighting the French; and this turning of the stream of wealth from both sea nations into the coffers of their allies, was, perhaps, determined, certainly hastened by the misdirection of that naval supremacy with which France began the war.

### *The War of the Spanish Succession*

This war followed in quick succession that of the war of the League of Augsburg; though the cause of the war had varied, it was but a continuance of the old struggle. "It is, in reality, the most business-like of all our wars, and it was waged in the interests of English and Dutch merchants, whose trade and livelihood were at stake."<sup>3</sup> This war was, in the main, a land war; its chief interest in the present study lies in the masterly combinations of Marlborough, and the views of that great commander on Command of the Sea, and the use to which he turned that great strategical asset. The naval struggle is thus summarised by Mahan:—

"Great as were the effects of the maritime supremacy of the two sea Powers upon the general result of the war, and especially upon that undisputed empire of the seas which England held for a century after, the contest is marked by no one naval action of military interest. Once only did great fleets meet, and then with results that were indecisive; after which the French gave up the struggle at sea, confining themselves wholly to a commerce-destroying warfare. This feature of the war of the Spanish Succession characterises nearly the whole of the

<sup>1</sup> "Influence of Sea Power on History," p. 170.

<sup>2</sup> *Ibid.*, p. 197.

<sup>3</sup> "Expansion of England," p. 130.

eighteenth century, with the exception of the American Revolutionary struggle. The noiseless, steady, exhausting pressure with which sea power acts, cutting off the resources of the enemy while maintaining its own, supporting war in scenes where it does not appear itself, or appears only in the background, and striking open blows at rare intervals, though lost to most, is emphasised to the careful reader by the events of this war and of the half century that followed. The overwhelming sea power of England was the determining factor in European history during the period mentioned, maintaining war abroad, while keeping its own people in prosperity at home, and building up the great empire which is now seen; but by its very greatness its action, by escaping opposition, escapes attention."<sup>1</sup>

England held the Command of the Sea, and it was Marlborough who saw how to use this command with deadly effect. Gibraltar was captured, not of set purpose, but rather because it invited attack, and no particular objective had been formulated for the fleet. The battle of Malaga and siege of Gibraltar followed in quick succession, and England again experienced the disadvantage of the possession of a port with a land frontier; also the further disadvantage of having no secure harbour for her fleets in the Mediterranean. But, as before pointed out, it was in the Mediterranean that the chief source of wealth to France lay, and it was in the Mediterranean where Marlborough, following the policy of William, sought to make the pressure of sea power felt. And from this policy developed his great combination whereby he designed to transfer the land war from the Netherlands to the South of France, and combining the sea power and land power, strike France a death blow by the capture of Toulon.<sup>2</sup> In formulating his plan of operations, nothing is more interesting to note than the manner in which he drew the line between the objective and the strategy by which it was to be attained so far as sea power entered into the combination.

The objective is clearly laid down, but the "sea officers are the best judges of what may be done with safety in this case." "The sea service is not so easily managed as that of land. There are many more precautions to take, and you and I are not capable of judging them." "I am so entirely convinced that nothing can be done effectually without the fleet, that I conjure you, if possible, to take Port Mahon, and to let me have your reasons for any other port, that I may continue to press them in England."<sup>3</sup>

It is for the statesman to determine the objective; and well is it when the nation's cause is in the keeping of far-seeing and deep-seeing leaders like William III. and Marlborough, whose objective strikes straight home at the opponent's heart. But

<sup>1</sup> "Influence of Sea Power upon History," p. 209.

<sup>2</sup> "England in the Mediterranean," Vol. II., p. 294, *et seq.*

<sup>3</sup> *Ibid.*, p. 301.

here the statesman's domain ends; on the sailor or the soldier it now devolves to say how the objective is to be realised.

By the peace of Utrecht, Louis succeeded in securing the Throne of Spain for the House of Bourbon, but otherwise the spoils of war all fell to England. France lost territory, and so too did Spain; Holland held her own in the Netherlands, but she gained no territory over the sea.

England, on the other hand, secured Gibraltar and Port Mahon in the Mediterranean and important territories in North America. France and Holland were exhausted and crippled by the struggle, England had prospered and grown rich on it; in her case "war fed war" and "war fostered trade." This result was due to the fact that England had secured the sovereignty of the seas, and thereby, in the words of Raleigh, she commanded the trade and the riches of the world.

#### *Comments.*

In this review of the rise and growth of England's sea power, and the contest for supremacy at sea which extended over a period of some 50 years, can be discerned the elements of sea power and those essential conditions which so powerfully affect it. Here also is portrayed in the diverse colourings of war the varying aspects of the working of that all-important feature of maritime warfare, "Command of the Sea," the more precise delineation of which form the object of our study. Foremost, in time of peace as in time of war, is to be noted the intimate connection between sea power and oversea commerce, so intimate that they very nearly become interchangeable terms. Next we note in sea power two very distinct phases; there is that phase which is presented where the "Command of the Sea" is in dispute, and that phase which supervenes when this condition is absent. It is with the first or primary phase that the three Dutch wars are to be associated, and with the second or secondary phase all those political demonstrations which have been noted, together with the latter portion of the war of the League of Augsburg, and the whole period of the war of the Spanish Succession. The diversity of war is illustrated and the distinction between the objective in war, from the strategy by which that objective is attained is always seen to be clearly marked, no matter how greatly the diversity of war may vary the objective. Lastly, in connection with the "Command of the Sea," we recognise sundry factors which are either essentials of or closely affect it; and we find certain of these forces operative not only in war but also in peace.

To particularise, we have in the first instance "a law which prevails throughout English history in the 17th and 18th centuries, the law, namely, of the interdependence of war and trade, so that throughout that period trade leads naturally to war, and war fosters trade."<sup>1</sup>

<sup>1</sup> Seeley, "Expansion of England," Lecture VI., pp. 109, 110.

We have in the primary phase of sea power referred to three distinct wars in which rivalry on the sea is the cause and supremacy at sea the issue of the contest. Each war, in spite of these identities, differed materially in character and condition. The objective in all cases in its ultimate aspect remains the same, exhaustion of the adversary by the suppression of oversea commerce, together with the maintenance and development of the belligerents' own oversea trade; but objectives are presented under different guises. So also is the strategy involved to secure the objective, though in principle it is dominated entirely by the feature characteristic of this phase, "Command of the Sea." And in these wars we notice several important factors operating producing far-reaching consequences. There are the physical or geographical considerations; no one can fail to note what an important part such conditions must play in a war between England and Holland, and of the advantages which position gives to England, or how the entrance of France in the struggle modifies or confirms these advantages according to the side taken. Similarly it is apparent that the Power in possession of a port commanding the entrance to the Mediterranean has a pronounced advantage in all maritime operations within that sea, and more especially in any operations against France or Spain. And when we note ports occupied and evacuated during peace we note such geographical conditions can be brought into play to influence the "Command of the Sea" in peace as well as in war. We see a nation close a war, having secured "Command of the Sea," and enter on the next war with a marked inferiority, as, for instance, England between the third Dutch war and the war of the League of Augsburg; and it is seen that "Command of the Sea" is directly affected by naval administration in peace as well as in war, and each war offers certain examples and certain lessons under this head, both in the case of the Dutch and the English Navies. We note in the case of the struggle between England and Holland the extraordinary recuperative power of both nations. Both give and take staggering blows, but like two well-matched boxers, they always come up to time. Not so in the case of France; once beaten, it is as if a knock-out blow had been dealt; there is no second encounter. This is because the Navies in the one case sprang and derived their vigour from their flourishing Mercantile Marine, while in the other case the Navy is the creation of the will of a man and not a national development.

The secondary phase begins where the primary phase ends, and concerns political movements and great combinations which are possible and practicable only because the "Command of the Sea" is assured and not in dispute, and that consequently there is no reservation in the application of sea power. It is not necessary to follow further the course and variations of this secondary phase of sea power, because surely the real character of the phrase "Command of the Sea" becomes clearly apparent. Command of the



Sea is a strategic condition—nothing more and nothing less. Strategically speaking, it is the aim and object of all maritime wars, because this condition must be secured in some measure before sea power can assert its influence. In the primary phase of sea power it must be the condition fought for; the secondary phase can never exist unless this condition prevails. In the primary phase, where "Command of the Sea is in dispute," it is seen that sea power comes into play in a degree directly proportionate to the measure in which this strategic condition is secured. In the first Dutch war neither side secures "Command of the Sea"; it is always in dispute, but England establishes a superiority, and the measure of her sea power is that degree of superiority attained. Similarly, in the second war, England retains her advantages; but, as in the first war, each reverse suffered always confers material advantages on Holland, whose very existence in the third war is saved, not because she has obtained, nor has the possibility of obtaining, "Command of the Sea," but because she will not permit her adversaries to hold undisputed mastery of the seas. It is for this reason, and for no other, that Holland is saved. Thus is illustrated in maritime as in land warfare the great truth noted by Clausewitz, that "the result in war is never absolute."<sup>1</sup> This characteristic of war, though it tends to obscure true issues, on a close examination never will be found to in any way affect this strategic condition of "Command of the Sea," which, in spite of all complexities, remains always a clearly defined condition. In this primary phase of sea power, whatever diversity war imposes, whatever objective be selected, the means by which the end is to be attained, the strategy to be pursued, is always the same, to Command the Sea. Violate this principle, as Louis XIV. did in the war of the League of Augsburg, divorce the objective from this strategic condition, or the strategy from such a goal, and the issue of the war must miscarry. In the secondary phase, this strategical condition being satisfied and not imperilled, the value and degree of force realisable from sea power is, other factors being equal, wholly dependent on the skill with which the objective is selected and prosecuted. In the case of William III. and Marlborough, the deadliness of their attack depended on the objective determined on; that is to say, the use to which the fleet, whose course cannot be stayed, is to be put. It is to be remarked that William and Marlborough followed the same objective; but that with Marlborough it is more elaborated and developed, and hence in operation more effective. Lastly, it is to be observed that over-sea commerce is as a rule the focus round which in war on the sea objective and strategy operate; and that this must be so because over-sea commerce is such a mighty source of wealth and prosperity to maritime nations. By commanding the seas this wealth is controlled, and the belligerent who controls the sea

<sup>1</sup> "Clausewitz on War," para. 9, Book I.



is enriched and provided with the sinews of war, while the adversary deprived of the same suffers a corresponding measure of exhaustion.

The "Command of the Sea" is therefore synonymous with control of the trade routes of oversea commerce, and the measure of control is the degree of command secured. When the Dutch fleets worsted the English fleets, trade flowed once more into the markets of the United Provinces. When the Dutch fleets were scattered, the riches destined for Holland flowed into the English markets. It has been pointed out that this condition is determined by the action of fleets, and by fleet action only; attempts and their failure to arrive at the same end by other means, namely, that of commerce destroying, have been noted. If these conclusions are formed on a sound basis, it becomes possible to explain a point which often gives rise to questions and difficulties. From time to time the question is raised: Is Command of the Sea the true aim of strategy or is it only the means to an end? If it is remembered that the objective of war or the end in view is one thing, and the strategy or the means to an end quite another thing, no difficulty need arise. It will be evident that in maritime warfare the "Command of the Sea" is that strategic condition which dominates all other considerations, without which sea power cannot be applied or expressed, and is applied or expressed in that measure or degree in which "Command of the Sea" is obtained. In dealing with "Command of the Sea," those other factors such as the volume of sea commerce, colonial expansion, geographical situation, naval bases and naval administration, which severally and individually directly bear on it, must never be lost sight of.

## PART II.

From an investigation of those events which culminated in establishing the supremacy of Great Britain on the seas, certain conclusions have been formulated with respect to the meaning of "Command of the Sea." It is now proposed to examine these conclusions in the light of events not less momentous or memorable.

It is not possible to follow out in detail the great maritime wars of the 18th century to the close of the great struggle with Napoleon. What will now be attempted is an examination of those events which presents this strategic condition in its most striking and instructive aspects. Hitherto our attention has been centred, for the struggle for supremacy, in home waters or in the Mediterranean. We now have to examine it in connection with the growth of an Empire beyond the seas, and view it in its world-wide aspect as it dominates the great expanse of waters, oceans, and seas throughout the world. Our attention will first be directed to those events which secured to Greater Britain her Eastern Empire; secondly, to that part of that great war in which Great Britain saved a rock and lost a continent;<sup>1</sup>

<sup>1</sup> Sir Cyprian Bridge, "The Art of Naval Warfare," p. 154.

and thirdly to that portion of the great struggle with Napoleon, in which that Great Conqueror, unable to secure the "Command of the Sea," unable to in any way dispute it, sought to compel Great Britain to fulfil his will by other means, sought, in fact, without disputing the "Command of the Sea," to render nugatory and abortive the advantages resulting therefrom; attempted to render sea power impotent, and to conquer the sea by the land. This enquiry completed, it will then be possible to take stock of the present and peer out into the future.

#### THE STRUGGLE FOR ASCENDENCY IN INDIA.

Up to the year 1744 the policy of all the great East Indian Companies, whether Dutch, French, or British, had been the development of trade and of trade only. It is true that the great struggles which convulsed the Mother Countries had extended to their Eastern settlements; conflicts had occurred between the Dutch and the French, both at Trincomalee and Pondicherry, but the settlements were established for trade, and the settlers desired nothing so much as peace to develop the resources of their settlements, and the accepted policy was that of non-interference with either each other or the neighbouring native States. It was under this policy that Dupleix had acquired fame as an administrator and wealth as a trader, and it was not from ambition but from necessity he departed from this time-honoured policy to embark on that course of action which if properly supported would have established a French Empire in India.

On the eve of the war in which France joined Spain in her war with Great Britain in 1744, Dupleix, recently installed as Governor-General in Pondicherry, received instructions from the Directors of the Company of the Indies warning him of the impending storm. In place of being directed to prepare for all emergencies, he was ordered to reduce expenditure in every way possible, even to the suspension of work on fortifications. It was clearly intimated to him that no assistance from France was to be expected, though he was informed that "La Bourdonnais had been ordered to proceed with a squadron to his assistance."<sup>1</sup>

Dupleix was not dismayed at the prospect before him. In place of carrying out his orders he effected savings in all ways possible, with a view to placing Pondicherry in a proper state of defence. With the English settlement the situation was far different. Here it was known that an English squadron was on its way charged with the duty of destroying French trade and the French settlement. Such was the situation when the war opened, and in compliance with the Directors' instructions, Dupleix approached Mr. Morse, the British Governor of Madras, with a view to arranging a treaty of neutrality. Not unnaturally the negotiations came to nought; it was scarcely to be

<sup>1</sup>Malleison, "History of the French in India," pp. 98, 101.

expected that the English would entertain any overtures of this kind. To add to the difficulties of the position of Dupleix, he received news that the squadron he hoped La Bourdonnais would bring to his aid had returned to France. Ruin stared him in the face; the French settlement was cut off from succour; the English settlement only awaited reinforcements from home to attack and overpower him. In this dire extremity Dupleix turned to the native chiefs and commenced that policy which, failing under French leadership, in English hands opened the way to the creation of an Eastern Empire. The statesmanship of Dupleix at once effectively checked English enterprise; the representative of the Nawabs of the Carnatic prohibited any attack of the French possessions on the Coromandel coast. Captain Barnet's squadron was thus restricted to preying on French commerce in adjacent waters. This it did with vigour and success, and Dupleix looked longingly for the arrival of La Bourdonnais. At length, having faced disappointments, difficulties, and perils, and having combated even disaster itself in a way which has never been surpassed, La Bourdonnais arrived off the coast, and Commodore Peyton, who had succeeded Barnet, failing to interrupt his progress, he arrived at Pondicherry early in July, 1745. The tables were now changed: it was Madras, not Pondicherry, which lay open to attack; the French fleet, not the English, was in the ascendant. The strategic condition, "Command of the Sea," had now passed into French hands; and that the situation was fully grasped by La Bourdonnais and Dupleix is very clear. To Dupleix, La Bourdonnais writes:—"My plan is to destroy or disperse the English squadron, if it be possible; the capture of Madras must result." In reply, Dupleix writes:—"Your idea regarding Madras is the only one which can indemnify the company for all its losses and expenses, restore the honour of the nation, and procure for this Colony a more solid footing than hitherto. This enterprise is very easy, and your forces are more than sufficient to carry it out; but it cannot be attempted with safety, before the English squadron is destroyed or beaten."<sup>1</sup>

It is very clear that both these great men realised the importance of "Command of the Sea" in the enterprise they are engaged in. In the sequel, Madras is captured. It is not necessary to follow here the intrigues of Dupleix with the Nawab, by which the former succeeded in evading that veto, which, for his own interest he had obtained, to check hostilities occurring between the rival settlements, nor the unfortunate controversies which arose between Dupleix and La Bourdonnais; suffice it to say that, in the face of the greatest opposition and difficulty, Dupleix triumphed, Madras was not ransomed. La Bourdonnais, after suffering great loss from a hurricane, left for the Ile de France, and with his departure the sea is again left open

<sup>1</sup> Malleon, "History of the French in India," pp. 132, 133.

to England. Before the war ended, Dupleix saw the "Command of the Sea" pass again from his hands, and with the arrival of Boscawen's fleet, Pondicherry is besieged; but a great triumph awaited Dupleix. In spite of overwhelming difficulties he made good his defence, and the siege was raised. It is important to note that between the fall of Madras and the siege of Pondicherry, Dupleix sought to reduce the English settlement at Fort St. David; he failed, and it was the fleet which saved the garrison. The situation was exceedingly critical, and as Malleeson points out:—"Had that been accomplished" (the capture of Fort St. David) "the fleets of England would have found no resting-place for the soldiers they carried with them, on the soil of the Karnatik, and the foundations of a French Empire might have been laid."<sup>1</sup>

We see a struggle going on for ascendancy, in which both the sea and the land play an equal share; it is hard, sometimes, to say where the most potent forces are. By sea power Madras fell, through sea power Fort St. David was preserved; but Pondicherry withstood the English attack, despite the loss of sea power. Peace follows, and Madras is restored to England; but her prestige is gone. "The English were regarded as an inferior, almost an annihilated Power; and the one result of this long-threatened attack was to invest Dupleix with an influence and an authority such as had, up to that time, devolved upon no European leader on Indian soil."<sup>2</sup> Thenceforth a new era opens, a struggle for empire in India. The struggle proceeds by land, and there is no question that it was on land that the great issue was determined, though on several occasions fleets and squadrons played a prominent part in the great struggle. In 1761, Pondicherry was captured, and the capitulation of this settlement has been fixed as the date of the final failure to establish a French empire in India.<sup>3</sup> In 1763 it was restored to France; in 1782, France and England were again at war, and France, though she did not secure "Command of the Sea" in Indian waters, certainly obtained a decided superiority. How came it, then, to pass that France so signally failed to arrest England's progress, or to restore in any way her fortune, despite the desperate effort made? The situation was a critical one; the peril for England was great; no more dangerous crisis marks the course of her history in India. The danger was averted by a wise, vigorous, and resolute statesmanship, and before the French effort could be made, the counter-stroke was prepared. "Whilst on sea the splendid achievements of the greatest of French admirals covered with a halo of glory this last effort on the part of France to expel the English from the Karnatik, on land the campaign was productive of little but disaster."<sup>4</sup>

<sup>1</sup> Malleeson, "History of the French in India," pp. 209, 210.

<sup>2</sup> *Ibid.*, p. 227.

<sup>3</sup> *Ibid.*, p. 580.

<sup>4</sup> *Ibid.*, p. 581.

"Even successful Suffren hailed the advent of peace—'God be praised for the peace!'—for it was clear that in India, though we had the means to impose the law, all would have been lost."<sup>1</sup> And all was lost, so far as French ascendancy in India was concerned. This momentous chapter of history, thus briefly described, which extended over a period of some 40 years, is instructive, because we see land and sea warfare running in parallel lines under novel conditions. Here we see the early settlements, the source of sea commerce, struggling and competing with each other for existence, and in the struggle two factors are in question: first, the support which comes from the mother-country; secondly, that strength and sustenance which belongs to the new country. Indian possessions were unlike all other settlements—a force of great potentiality lay dormant in the goodwill and the material assistance of the races and nations of India. Dupleix realised the existence of the force first, and strove to develop it, and so well did he succeed that, though in a critical time he received aid from the sea, he was also able to make headway against his foes in equally critical times when he was cut off by sea. So, too, England, though saved in critical times by the sea, having adopted Dupleix's policy, and outdistanced all French effort, she was enabled by this same force to ward off that determined attack which, in the hour of her weakness, was launched against her, when the sea no longer maintained her cause. It is important to recognise that time and opportunity count for much in war. Military conditions may be similar on different occasions, but the results may be entirely dissimilar because other conditions have been materially modified or changed. It is sometimes urged that if "Command of the Sea" is secured at the vital spot, then in the end, when victory is secured, all prizes will fall into its net. This is true in the main, but it is not a truth of universal application. As settlements develop and acquire strength and wealth; so, too, do their respective interests grow; so, too, does independence develop. Colonies are not military posts, and they must never be treated as such. If not aided and supported when assistance is imperative, it may, as it did with French power in India, come too late at a later date. It may be doubted if any success by Suffren on the sea could in any way affect or disturb that ascendancy which England had secured in India. The problem deals with other communities, other interests, other conditions, than those attaching directly to the mother-countries. It may be assumed that the mother-countries are maritime nations, and that the "Command of the Sea" is the dominating factor in the struggle. It does not necessarily follow that in the case of distant colonies or possessions the same strategic condition necessarily applies. It mostly will, but not necessarily always does. It did not in India between 1741 and 1782; internal forces in India were the main and the

<sup>1</sup> "Influence of Sea Power upon History," p. 464.



determining forces. As might be expected, we note that the leaders, the organisers of the struggle, are confined entirely to those on the spot. In this struggle we know of no great name in either home country which plays any very conspicuous part in the contest. Times have changed greatly, and the cable links closely the colony to the mother-country; but the cable cannot convey those sentiments, that knowledge, and that power of apprehension, which can only be acquired by those on the spot, though the fact is frequently lost sight of. The story of French power in India is intimately connected with the "Command of the Sea," the lesson to be drawn from it is instructive, but it is a lesson of warning.

#### THE WAR OF AMERICAN INDEPENDENCE.

This war, which can only be dealt with briefly and partially, is, perhaps, the most instructive of all the wars of the 18th century. Not only is the supremacy of Great Britain on the seas challenged, but the war is a world-wide war. In the East, in the West, in the Mediterranean, vital interests for Great Britain are at stake, and encompassed by enemies she is called on to protect her interests in all parts of the world. It is, however, only in one portion of the vast theatre of war that it is possible to fix our attention, namely, in America, where the most momentous issues of the struggle were in question, and were decided against Great Britain. It is to those factors, dealing with the "Command of the Sea," which operated to the disadvantage and discomfiture of Great Britain, which it is now proposed to investigate, for it is here that will be found valuable lessons for the future.

When France, shortly to be followed by Spain, declared war against Great Britain in 1778, the American Colonies had been in revolt for some two years with varying results. At the time in question the Americans held Boston. Narragansett Bay and Rhode Island, New York and Philadelphia were occupied by the English. In the south matters were at a standstill, and in Canada the Americans had failed.<sup>1</sup> Despite the fact that but a few months earlier the First Lord of the Admiralty had stated in the House of Lords that: "Our Navy is more than a match for that of the whole House of Bourbon,"<sup>2</sup> at the first indication of war with France the land operations in America were modified. "Orders were sent to America to evacuate Philadelphia and concentrate on New York."<sup>3</sup> This movement was necessary because New York was, undefended and exposed to attack though it was, the base of operations. The movement was only just accomplished in time, and only then by the vigorous and timely assistance of the fleet. D'Estaing, with twelve ships-of-the-line and five frigates, had left Toulon in April, and by the second week in July was off Sandy Hook with an inferior force

<sup>1</sup> Mahan, "Influence of Sea Power on History," p. 347.

<sup>2</sup> *Ibid.*, p. 341.

<sup>3</sup> *Ibid.*, p. 359.



barring his further advance. The contest was declined, and now the British Admiral proceeds to Rhode Island to secure that important coign of vantage. But here he was forestalled by D'Estaing, who, nevertheless, put to sea on Howe's approach: no decisive action took place, but Rhode Island was saved, and the fleets repaired to New York and Boston respectively. D'Estaing, after a short stay at Boston, repaired to the West Indies; here he is foiled by Barrington, who captures St. Lucia, as a set off to the loss of Dominica, and for some time longer operations are confined to the West Indies.<sup>1</sup> The French fleet being absent from American waters, the English, with the few ships available, organised an expedition to Georgia and captured Savannah. News of this movement reaching D'Estaing, he promptly repaired thither, but being unsuccessful he abandons the cause of America and sets sail for France. The English, free to act, now press their attack and, "the whole State was then quickly overrun and brought into subjection."<sup>2</sup> D'Estaing's successor was De Guichen, and shortly after his appearance on the scene, Rodney took over the command in the West Indies. The operations of the fleets were restricted to the West Indies, and it was not till late in the summer of 1780 that Rodney arrived at New York, having divided his fleet in order to leave a force in the West Indies. The risk run was a great one, but Rodney was anxious both for the safety of the West Indies and America, and well he might be. On the 12th July, 5,000 French troops and seven ships-of-the-line, under De Ternay, had arrived to reinforce the Americans, and the English were forced to concentrate on New York once more. This French reinforcement was at Newport, England having evacuated Narragansett Bay a year earlier. The opportunity was thus offered to Rodney to attack the inferior French squadron. He has been much censured for not so doing; but no one was more convinced or impressed with the strategic importance of Rhode Island than Rodney was, as will be seen from his letter to the First Lord of the Admiralty, from which extracts will shortly be given. The remainder of the story can be briefly told. De Guichen is succeeded by De Grasse, who reached the West Indies the latter part of April, 1781. After carrying on operations in the West Indies for some two months, he is called by important despatches from Rochambeau to America. At this time, the English, who had obtained important successes, were engaged in a hazardous enterprise in the Chesapeake, on which they were concentrating all their strength. Of these operations the English Commander-in-Chief remarked:—

"Operations in the Chesapeake are attended with great risk unless we are sure of a permanent superiority at sea. I tremble for the fatal consequences that may ensue."<sup>3</sup>

<sup>1</sup> Mahan, "Influence of Sea Power on History," pp. 360-367.

<sup>2</sup> *Ibid.*, p. 376.

<sup>3</sup> *Ibid.*, p. 385.

Rodney had sent fourteen ships-of-the-line to North America on hearing of the departure of De Grasse, but even this reinforcement was insufficient to give England a superiority of force. De Grasse arrived off the Chesapeake with 28 line-of-battle ships, and when Admiral Graves reached the scene of action, he found himself in inferior force. Graves, however, attacked, but ineffectually, and being held in check by De Grasse, De Barras, who had left Newport for the purpose, effected his junction with the French fleet. Graves could now effect nothing, and Cornwallis, cut off by the sea and hemmed in by land, was forced to surrender. Many minor features in the operations helped to bring about the discomfiture of the English; the fortune of war was certainly against them. If, however, one fault more than another influenced the result, it was the evacuation of Rhode Island.

From Rhode Island came the reinforcement which gave De Grasse his overwhelming superiority—gave him, in fact, "Command of the Sea" in American waters—and with that reinforcement came, too, the siege train without which the siege of Yorktown could not have been undertaken.<sup>1</sup> With the capitulation of Yorktown, England lost the American Colonies. Throughout the war important naval operations had taken place, both in American and West Indian waters, but the strategic condition "Command of the Sea" had not been submitted to the arbitrament of a great battle. This followed within six months of the fall of Yorktown, and De Grasse, by whose operations Independence was secured to America, found himself signally defeated and a prisoner in the hands of the English. The "Command of the Sea" in the day of battle rested with England; but during the few months the "Command" was temporarily lost in American waters, England lost her Colonies. On that great historic fact, the final result of contest for supremacy in American and West Indian seas made no impression whatever. In this respect the War of Independence resembles the struggle for empire in India, but with a different result. In both contests we note a war in which the sea and land forces are combined in the furtherance of a common object. Throughout the American war, however, land operations are always found hampering the free movement of the English fleet. Called on, as was the Navy, to do double duty in both American and West Indian waters, it was of the utmost importance that as far as possible the land forces should be self-dependent. This condition would have been secured had measures been taken to provide secure bases, and to hold strategic points. Such measures would, if taken, have served a twofold purpose. While rendering the field army more independent of the fleet, they would have also served to facilitate operations by sea. Coast defences are only adjuncts, but they are indispensable adjuncts, both to sea and land warfare. The following extracts from Lord Rodney's letter to the Earl of Sandwich need no comment:—

<sup>1</sup> Mahan, "Influence of Sea Power on History," pp. 389, 391.

"It is now turned into a war of posts, and unhappily for England, when they have taken posts of infinite advantage, and which, if maintained, would have brought the rebels to reason, the British troops have unaccountably and without good reason evacuated them. . . .

"The evacuating Rhode Island was the most fatal measure that could possibly be adopted. It gave up the best and noblest harbour in America, capable of containing the whole Navy of Britain, where they could in all seasons lay in perfect security, and from whence squadrons in forty-eight hours could blockade the three capital cities of America, namely, Boston, New York, and Philadelphia. France wisely took advantage of our misconduct, and has used every endeavour to make it almost impregnable. On my arrival at New York I used the most strenuous endeavour with the general to undertake the siege. I was told it was too late, that the enemy had made it too strong, and that although 6,000 men would have been sufficient for the undertaking a month before, it would then require at least 15,000. Had not this place been evacuated, the French must have sheltered themselves in the Delaware or Chesapeake, where they could have been easily blockaded, which is not the case at Rhode Island, off which it is too dangerous for squadrons to cruise in the spring, autumn or winter months, as your lordship may perceive by Mr. Arbuthnot's laying with his squadron in Gardiner's Bay, which is 18 leagues to leeward of Rhode Island, where, if Monsieur Ternay's squadron sails with the wind from N.W. to N.E., Mr. Arbuthnot cannot possibly move in time to intercept him.

"I must now, my lord, come to the third port, which our troops have twice taken possession of and evacuated, Portsmouth and Hampton at the mouth of the River James in Virginia, a port which commands the Chesapeake, and where the people are loyally disposed. . . .

"For my part, I know no port in America where the squadron under Mr. Arbuthnot (which he is ordered to keep with him in the winter months) can shelter themselves but in the Chesapeake, or where the stationing a squadron would be more detrimental to His Majesty's rebellious subjects; but even then it would be necessary that His Majesty's troops had a port at Portsmouth or Norfolk, without which the squadron stationed in the Chesapeake would find it extremely difficult to get fresh water."

It is realised that the strategy of the war of 1778 has always been severely criticised, as well as the naval administration preceding it, which doubtless accounts for a tendency to avoid the study of a subject which from its result is not congenial. It is

<sup>1</sup> "Life of Lord Rodney," Vol. II., p. 429. Quoted by Mahan, "Influence of Sea Power upon History," p. 350, footnote.

true that the strategy of the war which followed differed in a marked manner from that of this war; but the situation was also very different. It must also be remembered that the inferiority of England was most marked in the home waters; that every endeavour was made to maintain "Command of the Sea" in distant waters, and that this result was, generally speaking, secured. It is this fact and the catastrophe resulting from the transient loss of this "Command" in America which makes the subject so deeply instructive. Given all unfavourable conditions, bad naval administration and faulty strategy, the issues of the contest in America are not so unevenly balanced as not to merit a close study.

#### THE WAR WITH NAPOLEON.

It now remains to very briefly study a contest unique in history, in which, so to speak, there were no battles and yet where a fierce and deadly struggle continued unabated for some four years. That struggle, in which the Great Conqueror of Europe, seeking to crush Great Britain, in the end brought about his own defeat. It is a struggle in which Napoleon sought to conquer the sea by the land. "The battle between the sea and the land was to be fought out on Commerce."<sup>1</sup>

It is impossible within the space available to attempt more than a most brief survey of the great contest in which Great Britain so nearly succumbed. Hostilities opened with the Decree of Berlin in May, 1806, by which it was sought to crush Great Britain by excluding her commerce from the Continent. It is interesting to note that the decree was to remain in force until among other things Great Britain "acknowledged that the law of war is one and the same on the land as on the sea; that it cannot be extended to private property of whatever kind. . . ."<sup>2</sup>

To this Decree Great Britain replied by Retaliatory Orders in Council in January, and notably in November, 1807, in which a paper blockade of all enemies' ports was proclaimed. "All ports and places of France and her allies, or of any other country at war with His Majesty, and all other ports or places in Europe from which, although not at war with His Majesty, the British flag is excluded, and all ports in the Colonies of His Majesty's enemies. . . ."<sup>3</sup> Napoleon further contemplated seizing the navies of Europe and combining them in an attack on Great Britain; but Great Britain did not wait for the blow to fall, but taking the offensive, attacked Denmark and captured her fleet, and in an "enterprise unfettered by any nice regard for punctilio, secured and brought back the largest capture ever drawn in to English harbours."<sup>4</sup> To the Orders in Council

<sup>1</sup> Mahan, "Influence of Sea Power on French Revolution and Empire," Vol. II., p. 289.

<sup>2</sup> *Ibid.*, p. 273.

<sup>3</sup> *Ibid.*, p. 284.

<sup>4</sup> Maurice, "Official Account of Campaign, 1882," p. 52.

Napoleon replied by the Decree of Milan. Meanwhile Russia has declared war against Great Britain, while Prussia, Austria, the Papal States, and Turkey, from one cause or another, had closed their ports to Great Britain; so that Napoleon could say that "England sees her merchandise repelled by all Europe, and her ships loaded with useless wealth seek in vain from the Sound to the Hellespont a port open to receive them."<sup>1</sup>

But the Decrees of both belligerents soon began to press heavily on the neutral powers, who now devised methods to evade these restrictions; by these means the pressure is relieved.

Great Britain took Portugal and Sweden under her protection, which was not without beneficial results to her commerce, more especially with regard to the Baltic Power. And so for two years the struggle continued, till in 1809 the pressure began to be felt. Napoleon himself found his financial difficulties increasing, due to the cessation of maritime commerce.<sup>2</sup> At this time both belligerents have resort to the expedient of licenses, whereby an attempt is made to develop a kind of recognised illicit trading. Smuggling and evasion became rampant, especially in the northern States. During all these years Napoleon got no nearer to the desired goal. Everywhere Great Britain crosses his path, and now her power in the Peninsula is beginning to be felt. To crush her he now bends all his energies to carry out his Decrees against her commerce with increased strictness and severity. Soldiers occupy the great ports and enforce the Decrees: "Wherever my troops are I suffer no English smuggling." "All ports of this once potent kingdom are filled with French soldiers, who seize and burn every article which can possibly have passed through British hands. Prussia is described as in a deplorable state, almost disorganised, and no employment for industry." And not only Prussia but Great Britain and all Europe were in a deplorable state. A crisis was fast approaching; "it was a question of endurance." In the Northern States alone Napoleon had seized some forty million dollars worth of British property, and towards the end of 1810 the situation was very serious. "In November the bankruptcies were 273. . . . Stoppages and compositions equalled in number half the traders of the kingdom. . . . The trade of the manufacturing towns is at a stand; and houses fail, not every day but every hour."<sup>3</sup> In France the state of affairs was even worse. "The effects of the loss of external trade were everywhere visible, in the commercial cities, half deserted and reduced to a state of inaction and gloom, truly deplorable; in the inland towns, in which the populace is eminently wretched."<sup>4</sup> Everywhere the same story of poverty and

<sup>1</sup> Mahan, "Influence of Sea Power on French Revolution and Empire," Vol. II, p. 278 (from Lanfrey's "Napoleon").

<sup>2</sup> *Ibid.*, p. 300.

<sup>3</sup> *Ibid.*, pp. 324, 325, 332.

<sup>4</sup> *Ibid.*, p. 334.



misery, but through all Great Britain's credit withstood the storm. "A humiliating fact," says a Parisian banker, "and one that gives the key to many others, is the state of credit in France and in England. The English debt amounts to about 3,500,000,000 dollars, ours to 250,000,000 dollars, and yet the English could borrow at need sums much more considerable than we ourselves could, and above all at an infinitely more favourable rate."<sup>1</sup> But other nations were also feeling the result of the strain, and with the commencement of 1811 Russia began to break away from the bondage of Napoleon. In spite of the financial distress, a reaction set in during that year. South American trade revived, Portugal was set free, Russia was freeing herself.<sup>2</sup> In Great Britain the clouds were beginning to break; in France they loomed heavier and blacker than ever, till with the disaster at Moscow the ruin so long impending overtook her. The struggle was ended, and in that bitter fight sea power won, and won because its inherent element is wealth — wealth which is common, not private property, which diffuses prosperity among the community which possesses it, and which therefore makes it a national possession. The issue in the balance in this desperate strife, it must be remembered, was national existence. Here is exhibited war in its sternest aspect; here is seen a violence which knows no bounds, as a study of the Decrees and retaliatory Orders of Council will testify. Again, it is the belligerents, not the neutrals, who impose the law. Who can study this page of history without being filled with admiration for the nation who could endure and stand firm and resolute under such hardships. It was the national courage and firmness that carried the day in this war, in which not only the Navy and the Army, but more especially the civilian, played a part. How many in the present day prepare themselves to play a like part; how many are taught or know about the great victory their forefathers won in the struggle that lasted from 1806 to 1812, when the sea conquered the land?

### PART III.

#### SEA COMMERCE AND THE MERCANTILE MARINE.

Our last task is to consider by the light of present conditions how far the forces and influences which operated in the past are still active agents if any new conditions have been imposed which materially change that aspect of "Command of the Sea" which is one of the chief features of English history in the 17th and 18th centuries.

Great are the changes which have taken place in the hundred years which have elapsed since the sea conquered the land; vast and altered are the problems which now confront the

<sup>1</sup> Mahan, "Influence of Sea Power on French Revolution and Empire," Vol. II., p. 339.

<sup>2</sup> *Ibid*, p. 342.



nation. Settlements have developed into prosperous Colonies, and these, again, are fast acquiring, and have acquired, the attributes and status of nations. How to consolidate the nations which go to make up the Greater Britain of to-day in such manner as to knit them in such bonds of mutual interest as will enable them to press forward with united aim and vigour to a development of greatness the ages have never yet witnessed, is the problem of the immediate future. Of such mutual interests history teaches that wealth is not the least; and the wealth of the Mother Country, the wealth of each Colony, where is it if not on the sea? Is not oversea commerce the measure of the wealth of Greater Britain, and is it not the sea which to her above all nations represents the "mother of prosperity"? The history of the German Empire teaches a lesson we might well remember. Commercial federation preceded by some forty years the unification of the German States; the Zollverein was the first step to Empire. So now we note Tariff Reform playing a similar part in the history of Greater Britain's politics. The national representative of this mighty force of oversea commerce is the Mercantile Marine. We note it still retains its old characteristic; it is intensely national and individual in character; it is as far from being a governmental creation as it was in its earliest days. The Mercantile Marine, now as of yore, is the result of the enterprise and resourcefulness of British merchants. But we have noted that from the days of William the Silent onwards, all Governments have fostered and nurtured the Mercantile Marine. The reason for so doing needs no repetition. The question of subsidies is a problem for economists to solve; it is not the concern of the sailor; but it is a different matter when a Minister of the Crown states that so long as Germany can carry British goods cheaper than we can ourselves, it is to our advantage to let them do so.<sup>1</sup> Such a statement causes a doubt to arise whether all the factors on which the structure of Empire rests are everywhere fully apprehended. We have seen from history how intimate is the association between the Navy and the Mercantile Marine. That intimacy has grown with years. Is not therefore the *personnel* of the Mercantile Marine specially a matter of public interest and concern? Yet but little general notice is taken in the defective organisation now in force for officering the Mercantile Marine. The peace struggle for "Command of the Sea" has commenced; no age has seen a struggle such as that now in progress. Germany has her policy of subsidies and her organisation for manning her Mercantile Marine. We have neither. Do not we leave too much in these days to individual enterprise and resource? Is it not time the wrangle as to whether training in a sailing ship is or is not essential was ended by action of some kind one way or the other?

<sup>1</sup> Debate on Supply, House of Commons, 28th May, 1908.

## NAVAL ADMINISTRATION.

The strength of the Navy must ever be of vital importance. So much so that to the popular mind "Command of the Sea" is determined by shipbuilding programmes. It is well that this should be so; but it is necessary that it should also be clearly understood all that is implied thereby. The burden of armaments has become acute, and those who have watched the trend of events have long foreseen this, and also foresee that the situation will become still more acute. Much depends on the result of this peaceful strife. As in Napoleon's days, so too now it is a question of financial endurance. If the Empire, steering a steady course between the Scylla and Charybdis of Jingoism and Quixotism will settle down quietly to the struggle, husbanding its resources and fostering that oversea commerce which is the source of wealth, no fear of the result need be entertained though the conflict may be long and bitter. In many aspects Greater Britain holds a truly formidable position; her powers of shipbuilding are unrivalled in all its branches; her Mercantile Marine and her commerce oversea and her oversea resources are unapproached. But the heritage bequeathed to her must not be allowed to stagnate, to develop at random, or to die unheeded. The resources inherited must be adapted and husbanded to meet the requirements of the future. So only can he who succeeds, perfect and mature that which another before him sowed.

## THE STRATEGIC SITUATION.

We have seen that events have oftentimes supervened in the days of peace which have materially modified or changed geographical conditions and thereby affected the strategic condition Command of the Sea. Such circumstances are no less potent in influence now than formerly. The value of ports and naval bases were apparent in the struggles of the past. The value of a naval base is to be measured wholly by the extent to which it is able to minister to the wants of a modern fleet. Greater Britain has in these particulars been very mindful of the lessons of the past. Her chain of ports along the trade routes of the world's sea commerce is unrivalled, and great have been the efforts put forward to render these ports efficient for the requirements of the Navy. This involves expense, and it is an expense which is not represented in battleships, and which therefore does not appeal to the public mind. But it is a necessary expenditure, for want of which many a battleship may easily become in war ineffective. In the financial strain which is now making itself felt, greater reluctance than ever, it is to be anticipated, will be evinced to expend money on naval bases and coaling stations, more especially as regards their fortifications. There is a distinct danger in drawing the scale of defence too fine, the danger of inviting attack. It would be better to follow Duplex's policy

and retrench all round to improve defences, rather than to retrench on fortification to effect savings. If unnecessary and wasteful expenditure were swept aside, there would be less fear of necessary expenditure having to make way to provide for vital expenditure.

Mediterranean ports have played a momentous part in the past, and there is nothing to show that in the future any change will manifest itself. It seems all important that Greater Britain should not allow herself to be lulled into a false security. The value of Gibraltar is dependent on its value to the Navy; a few score mules could place wheeled modern artillery into positions which could defy the armament of the Rock and render it useless as a naval station. In any war the value of Gibraltar as a naval base is dependent on the neutrality of Spain. It is a serious reflection, yet one from the way it is treated, in which it seems to be anticipated that matters will right themselves somehow, although it is not apparent how; and that the last thing to do is to think or talk about such matters.

#### WAR AND INTERNATIONAL LAW.

It has been demonstrated that war feeds on trade, and that "war fosters trade." We have analysed the elements in question and seen them in operation in the diverse guises war puts on. Recent times have seen the nations of the world assemble in solemn conclave to enact measures which shall humanise war and, if possible, put an end to it. That august assembly has debated on the question of exempting private property from capture on the sea during war. The retention of the right of capture has been described as "one of the surviving methods of barbarism."<sup>1</sup> This is not the place to debate the question, which is, however, of vital import to considerations affecting "Command of the Sea," but it is desirable that the points at issue should be clearly set forth. Sir Edward Grey stated, to the amazement of some: "That law counts for very little in the estimation of statesmen."<sup>2</sup> In this he but re-echoes the views of Clausewitz, where, having stated that war is an act of violence, he goes on to add that "self-imposed restrictions, almost imperceptible and scarcely worth mentioning, termed usages of International Law, accompany it without essentially impairing its power."<sup>3</sup> The writer of the article referred to appears to hold the view that in war it is neutral Powers who enforce International Law. This depends wholly on circumstances, and who the belligerents are. War is violence, and might is right, and it is the mighty who interpret International Law. The views of Mahan on this point are very clear. "It is not unlikely that, in the event of war between maritime nations, an attempt may be made by the one having a great sea power,

<sup>1</sup> Contemporary Review, March, 1908.—Sir J. Macdonnell.

<sup>2</sup> *Ibid.*

<sup>3</sup> "Clausewitz on War," Book I., para. 2.

and wishing to break down its enemy's commerce, to interpret the phrase 'Effective blockade' in the manner that best suits its interests at the time; to assert that the speed and disposal of its ships, makes the blockade effective at much greater distances with fewer ships than formerly. The determination of such a question will depend, not upon the weaker belligerent, but upon neutral Powers; it will raise the issue between belligerent and neutral rights; and if the belligerent has a vastly overpowering navy, he may carry his point, just as England, when possessing the mastery of the seas, long refused to admit the doctrine of the neutral flag covering the goods."<sup>1</sup> The teachings of history on this subject are very clear; if sea commerce is not to be contended for, for what are nations to fight on the seas? and how is a maritime nation to coerce or be coerced? If oversea commerce is private property, what, then, is public or national property? Was it not because this was, and is, the secret of sea power that Napoleon laid so much stress on it in his Berlin Decree.

In peace time there is always a tendency to bind violence; the efforts of benevolence, so irresistible in peace, are, however, apt to be rudely shaken in the crash of nations struggling for existence:—"Only an event that shook all established principles, as an earthquake shakes the foundation of the earth, was able to clear away the pettifogging red tapeism, the prejudices, the customs, and the learned nonsense of the former century, and bring about a complete reform."<sup>2</sup>

#### CONCLUSION.

The conclusions to which our study inevitably brings us are, that the foundations of empire have not changed, and that oversea commerce is one of the corner stones of those foundations, and that the "Command of the Sea" is that military condition which secures to a nation its commerce on the sea. Many forces directly influence this military condition; many adjuncts are indispensable to it. But this condition is the focus round which all naval energy revolves; to preserve it is the object of all endeavour in peace, and to establish and enforce it, of all action in war. Greater Britain is seeking to strengthen and invigorate her Empire by uniting in ever closer bonds the nations and peoples which comprise that Empire. In that consummation there dawns a vision of empire of surpassing splendour and immeasurable potentialities; with that splendour and greatness come, too, great responsibilities and trusts.

In considering the "Command of the Sea" and its preservation under modern conditions, the greatness of the responsibility is apt to appal; and there is a temptation to avoid difficulties which sometimes appear insurmountable, by resort-

<sup>1</sup> "Influence of Sea Power on History," p. 138.

<sup>2</sup> Von der Goltz, "The Nation in Arms," p. 11.

ing to roundabout methods or novel expedients, to ensure the "Command of the Sea" throughout the Empire. The story of the past is clear; there is but one road, no middle course is safe; the strength of the Navy is the strength of her fleets on the seas. These fleets must be increased in size and in numbers as necessity demands; there is no alternative. But if the story is a clear one, it is also a very encouraging one. If Great Britain is merged into Greater Britain, so, too, must Great Britain's Navy merge and expand into that of Greater Britain. If the Future of Greater Britain dazzles, the expansion of the Empire's Navy must not dismay. If the Future is to be even more glorious than the Past, then, too, must sea power even exceed its past achievements; and the measure of the Past shall be the earnest of the Future.

"Far as the breeze can bear the billows foam,  
Survey our Empire and behold our Home."

THE importance of the weather in all naval and military operations is so obvious that the omission of meteorology from the syllabus of our studies can only be justified on the ground that weather forecasts cannot be made sufficiently far in advance to be of practical use. It is true that in some countries, and in special cases, long-distance forecasts have been made with wonderful success; but as a rule they require in their preparation a mass of statistics which are not available to everybody, or they are the work of men who do not amount to the world how they have been treated at. The predictions regarding the Indian monsoon-rains are good examples of the latter, while some of the weather forecasts are typical of the former. For short periods of three and four days forecasts have been familiar to us for some years. Here is one which was published for Ireland during the recent visit of the British Association to Dublin.

SATURDAY, 17TH SEPTEMBER, 1893.

"Irish Times," Special Weather Forecast.

The following forecast of the weather in Ireland for the next three days is specially made for the Irish Times. The next forecast will be published on Wednesday.

First day, N. and N.W. to W. winds moderate or light, mostly fair and cool; second day, W. to S. and S.W. winds freshening, fair to cloudy, some rain; and middle day, S.W. to N.W. winds fresh and strong to moderate, some showers, or drizzle and cooler.

The recent slowly developing cyclone is being followed on Monday by the customary series of anti-cyclones, which is likely to introduce a short fair spell with the arrival of another cyclone after its western edge has passed eastwards across this meridian.



## A NEW PRINCIPLE IN WEATHER FORECAST- ING AND ITS IMPORTANCE IN NAVAL AND MILITARY OPERATIONS.

By Colonel H. E. RAWSON, C.B., R.E., F.R. Met. Soc.,  
Ph.Soc., F.R.G.S.

On Wednesday, 18th November, 1908.

Rear-Admiral A. M. FIELD, F.R.S., Hydrographer of the Navy,  
in the Chair.

THE importance of the weather in all naval and military operations is so obvious that the omission of meteorology from the syllabus of our studies can only be justified on the ground that weather forecasts cannot be made sufficiently far in advance to be of practical use. It is true that in some countries, and in special cases, long-distance forecasts have been made with wonderful success; but as a rule they require in their preparation a mass of statistics which are not available to everybody, or they are the work of men who do not announce to the world how they have been arrived at. The predictions regarding the Indian monsoon-rains are good examples of the former, while some of the weather almanacs are typical of the latter. For short periods of three and four days, forecasts have now been familiar to us for some years. Here is one which was published for Ireland during the recent visit of the British Association to Dublin:—

SATURDAY, 12TH SEPTEMBER, 1908.

### *"Irish Times" Special Weather Forecast.*

The following forecast of the weather in Ireland for the next three days is specially made for the *Irish Times*. The next forecast will be published on Wednesday:—

First day, N. and N.W. to W. winds, moderate or light, mostly fair, and cool; second day, W. to S. and S.W. winds, freshening, fair to cloudy, some rain, and milder; third day, S.W. to N.W. winds, fresh or strong to moderate, some showers, to fairer and cooler.

The recent slowly departing cyclone is being followed by the customary wedge of anti-cyclone, which is introducing a short fair spell, until the arrival of another cyclone after its western edge has passed eastwards across this meridian.

I have brought this particular forecast out of many to your notice because in the first place it proved to be accurate, and because the author indicates in it the principle upon which he proceeded to arrive at his conclusions, viz., the recognition of a three-day type of weather in which a slowly departing cyclone was being followed by the customary wedge of anti-cyclone. Aided by such a principle, he was able to make a satisfactory prediction without having stations to the west from which to draw information. It is possible that some in this room are not well acquainted with the expression a "wedge of anti-cyclone," nor with the weather associated with an anti-cyclone itself; and as I shall have a great deal to say on the subject of these high-pressure systems, I shall put these and some other well-recognised types by means of lantern slides on the screen in front of you.

[Here followed slides illustrating the seven principal weather types—"anti-cyclone," "wedge," "cyclone," "V-depression," "secondary cyclone," "col," "straight isobars," with description of the winds and weather experienced with each type.]

These seven fundamental forms of isobars are found to occur all over the world. Locality may modify but can never change the type of weather that they bring with them. Warmth and drizzling rain are always found in the front of a cyclone as it advances, and lower temperature with a rapidly clearing sky in its rear as it retreats from an observer. The characteristic weather belonging to each of these seven forms has been worked out in great detail, and may be found in such books as Abercromby's "Weather."

The recognition of such weather-types marked the first important advance in forecasting. The innumerable statistics regarding wind, temperature, humidity, cloud and rainfall which had been collected began to fall into place, and the skill of the forecaster lay in detecting the type and the direction in which it was likely to move, and in recognising the earliest signs of its successor. If he was able to do this he was in a position to announce what weather we might expect for about the next 24 hours. The gradual accumulation of synoptic charts led to its being observed that some of the fundamental types were more closely allied to one another than to others, and that when extensive areas embracing the Atlantic Ocean as well as our continent were considered, certain specific types recurred, associating themselves with the seasons and showing a tendency to succeed one another in a definite way. In this country Abercromby was amongst the first to classify the types which arise over Western Europe, and to assign them to definite seasons of the year. In his "Principles of Forecasting by means of Weather Charts," published by the Meteorological Council, he represents four primary types of weather, which coincide with four distinct arrangements of pressure-distribution over our area, to which he gives the names of the Southerly, the Westerly, the Northerly, and the Easterly, according as our prevailing wind is from the

South, West, North, or East. And he was able to say in what season of the year each type might be expected. This marked the second great advance in forecasting, and it only became possible through the publication by the late Dr. Buchan of his invaluable isobaric charts representing the distribution of pressure over the globe. Here is a slide showing the pressure for the month of January.

I would call your attention to the high-pressure areas marked in red which have earned the name of Permanent Anti-cyclones, not because they are stationary, nor because they always appear over the same districts, but because they combine, as you see, to form in our winter season a belt of high pressure round the Globe in the Northern Hemisphere. In the far east you see the great Siberian system, stretching over almost the whole of Europasia, and having its centre of maximum pressure, or action-centre, nearly over the Desert of Gobi. The Atlantic system to the west is merged with it, and is confined to a comparatively small area of the ocean, and is partly over the land. Over the United States and the western part of the Atlantic there is the North American system, and merged with it on the west is the Pacific system. All the action-centres of the systems lie within the continuous belt which encircles the globe, and these are their mean positions during the month of January. The winds which prevail are shown by the arrows. In the Southern Hemisphere the belt is not continuous. It is the summer season there, but we see that three permanent systems retain their positions over the Pacific, Atlantic, and Indian Oceans. The winds you observe are blowing round the centres in the opposite direction to that in the Northern Hemisphere.

The next slide for July shows a very different pressure-distribution. The Siberian and North American systems have gone, and in their places we find low pressure, coloured blue. The Atlantic and Pacific systems in the Northern Hemisphere still retain their positions, but have moved altogether over the oceans off the land. The belt is now broken up, and the term "permanent systems" appears to be no longer applicable to the Siberian and North American systems; but in the Southern Hemisphere, where winter is prevailing, the anti-cyclonic belt is now continuous, and an action-centre is found over the land in South Africa, as well as over the oceans. The action-centre which lay off the west coast of Australia in January is no longer there, but has disappeared from its summer position just as we found those of the Siberian and North American systems did from their winter positions.

It was by studying isobaric charts of this kind, in which the pressure-distribution over very large areas of the earth's surface is shown, that Abercromby obtained the four types to which reference has been made. He observed that the relative positions of the high-pressure systems, with respect to one another within the northern anti-cyclonic belt, had a tendency to recur at certain seasons. In all the types these systems control

the distribution of pressure; and the importance he attached to the position of the belt and of the anti-cyclones within it is apparent throughout all he writes regarding the weather associated with the types.

For many years it was the custom of meteorologists to record all anti-cyclones which passed over the areas they were dealing with without attempting to classify them according to the main system to which they were related. In 1898 the writer pointed out in a paper to the Royal Meteorological Society,<sup>1</sup> that if this were done, quite a new light was thrown upon the tracks followed by high-pressure systems within the northern anti-cyclonic belt. When the main or permanent systems ceased to be found in their January or July positions they did not dissipate or become "reversed," as was commonly supposed, but they moved on to reappear over another locality at no great distance away. Such movements were not continuous, but could be described as progressive in character, and generally speaking they were in one direction in the early months of the year and in the opposite direction in the later months. When the systems reached the end of their seasonal swing they hung over a region for some considerable time. Two important points connected with the tracks they followed were detected: (1) for a certain number of years these would take the systems north of a mean seasonal position, and in the years which followed, south of it. (2) The meridians which the systems reached when moving east or west were not the same in succeeding years, but sometimes they were in advance of and sometimes behind their mean seasonal positions, both in going and returning. The simplest explanation of the first point was that the anti-cyclonic belt itself, in which the systems were moving was not in the same latitudes in succeeding years, but was sometimes north and sometimes south of a mean position. The seasonal migration of the belt north and south with the sun was easily traced on synoptic charts; but that there was an annual shifting of the belt in latitude, so that in some years it would be found nearer the equator than in others, was a theory which could not be put forward without a great deal more investigation. As regards the second point, the daily synoptic charts which had been examined and those which had been compiled from them, left little doubt about the matter, and the explanation it afforded of our early and late springs, late summers, and such like phenomena was welcome. The most important feature disclosed was that any abnormal seasonal displacement which took place in either the North American, North Atlantic, or Siberian permanent system took place in all simultaneously.

At the time when attention was called to the seasonal progressive movements of the permanent systems constituting the belt of high pressure, such an idea was quite a novel one in

<sup>1</sup>Quarterly Journal of the Royal Meteorological Society, Vol. XXIV., No. 170, July, 1898. "Anti-cyclonic Systems and their Movements."

this country. It received much support, however, from a set of 20 types which was published about this time by the Meteorologists Professors van Bebbber and Köppen. As the result of an exhaustive examination of synoptic charts they were able to announce that such types persist for four days on an average, and that there is a fairly definite tendency amongst some of them to succeed one another or to be associated with one another in some regular way. They belonged to certain seasons, and whereas they would precede at one season those with which they were most closely allied, they would follow them at another. The idea of a seasonal progressive movement of those systems which appear in the types is distinctly suggested to us by this fact. Anti-cyclones occupy a prominent place in them, and as they are not well known to many who are present, the more characteristic of them will be thrown on the screen according to the seasons when they occur, and as far as the authors have pointed it out, in the order in which they preceded or followed one another during the years that were analysed. In doing so the anti-cyclones which appear in the types will be identified with the permanent systems which have been referred to as belonging to the belt.

[Fourteen slides were shown illustrating the way in which the types succeed one another, and suggesting a progressive seasonal movement of the anti-cyclonic systems.]

The first four are summer types, and can all be readily identified with the Atlantic anti-cyclone. It is significant that the last type shown is found to prevail principally as summer is just beginning or as it is just ending; that is, as the anti-cyclones are going to or returning from their midsummer positions.

The next three are spring types, and are given in the order in which they are found to occur, the first one immediately preceding the summer types. The analysis shows that the last of the three is never associated with any of the summer types. It is a spring type, but is only associated with the winter types.

The next type is found to precede the last very frequently, and to be prevalent both in February and October. Observe the months. They suggest a movement of the anti-cyclones which appear in them from and to their winter quarters. The type is closely associated at both times of the year with the next one, which precedes it in February but follows it in the autumn.

The next five types are given in the order in which they are most associated with one another, the third and fourth being characteristic types of mid-winter. The last type leads back to the particular spring type which is found to be associated only with winter types.

By the detection of these twenty types another great step in advance was made in the science of forecasting. The weather associated with each of them was thoroughly well known, and the possession of such a sequence made it possible to interpret correctly the earliest signs of an approaching type. There was



nothing to be found in the analysis suggesting that the latitude of the types varied in any year; but the fact that seasonal progressive movements of the permanent systems were proved to be taking place encouraged the hope that a variation in the latitude of such movements would be traced, if it was looked for in the anti-cyclonic belt of the Southern Hemisphere, where atmospheric conditions were known to be so much more stable. We are already familiar with the seasonal oscillation of this belt, which is well seen in a diagram [Slide] prepared by Mr. F. C. Russell, F.R.S., for the Australian area. Notice how the belt controls the tracks of the cyclones, and how these vary with the position of the belt.

#### *The Anti-cyclonic Belt of the Southern Hemisphere.*

Fortunately we possess a large number of isobaric charts of this belt. Those published by Buchan for the years 1870-1884, and 1885-1894, by the Hydrographic Department of the Admiralty for 1855-1895, and by the Meteorological Council for the same years, show the mean monthly positions of each of the permanent anti-cyclonic systems from the east coast of South America to Australia. There are also numerous charts showing the pressure-distribution over the whole of the Southern Hemisphere during the particular months of January and July. Here is a chart of Buchan's for July. [Slide showing the mean positions of the systems over the Atlantic, Pacific, and South Indian Oceans, together with the systems which form over the land in winter.] By means of his charts for the other months of the year it is possible to trace the positions the systems occupy as they move to and fro between their winter and mid-summer quarters.

Not only is each system found further south in summer than in winter, which is the natural consequence of the migration of the belt as a whole, but there is an easterly and westerly movement also. This is particularly striking in the case of the system over the South Indian Ocean, which moves with considerable regularity from the West Coast of Australia to the East Coast of South Africa and back again, and has been designated the Australian system in consequence. It reaches its extreme easterly position in February and its extreme westerly, as a rule, in July. All the charts concur in these movements, and afford the strongest evidence of the progressive character which was traceable in the northern anti-cyclonic belt; but when we compare the charts with one another, the mean monthly positions of the action-centres are found to vary considerably if the years to which the charts refer are not the same. In every case in which the period covered by the charts is a long one, the action-centres occupy a greater area from north to south than if the period is a short one. *Moreover, the belt itself is not always lying between the same parallels in such charts.* Both these facts strongly support the view that the belt shifts its

latitude and causes the action-centres to be displaced north and south of a mean position in certain years. When we compare the isobaric charts for July published with Mohn's "Grundzüge der Meteorologie" in 1879 and 1883, we actually find that the belt is lying several degrees further south in 1883 than it was in 1879. In Buchan's charts for 1885-1894 it is also in a more southerly position than in his charts for 1870-1884.

But as I have explained when we were examining the direction of the winds which prevail on the north and south sides of the belt, if the belt shifts its latitude the records of such places as Cape Town and Durban must show a variation in the frequency of the winds from an easterly and westerly direction, if those places during some years are on the north side, and during others on the south side of the axis of the belt. Such variations have been found to occur and have been pointed out in both places.<sup>1</sup>

In 1892, 1893, and 1894 the frequency of winds with a westerly component was so abnormally high at Durban as to mark these years out for special examination. The year 1893 was found to be remarkable for a heavy rainfall over the Colony of Natal, and for a phenomenal fall at Durban, while the annual mean pressure at the latter place was exceptionally low. And the Government Astronomer of Natal, in his report for the year explained the facts by the rain-belt, which lies to the south of the anti-cyclonic belt, being out of its normal position and far further north than usual; but if the rain-belt was far further north than usual, the anti-cyclonic belt must have been so also. In this fact the first clue was obtained to the position of this belt in any year. By examining all available South African records and by personal inquiry from stations along Latitude 26° S. and southwards, I ascertained that after 1893 the rain-belt, with the anti-cyclonic belt to the north of it, moved steadily southwards. The passage of the latter belt could be distinctly traced by all those characteristics which we have seen to belong to anti-cyclonic systems.

In Natal the anti-cyclonic conditions culminated in the year 1899, the rainfall having been steadily in defect since 1895, and in the report for the year the rainfall at Durban is stated to have been the lowest on record since 1878. The mean annual pressure at Durban in 1899 was also exceptionally high, which would be the case if the belt in its passage south was now in proximity to this place. But our hypothesis regarding the shifting of the belt's latitude requires that its passage north to its position in 1893 should be traced equally with its passage south. On examining the records for the years prior to 1893 it was found that in 1887 the mean annual pressure at Durban was also

<sup>1</sup>For details of this and other facts brought forward in this paper, see Quarterly Journal of the Royal Meteorological Society, Vol. XXXIV., July, 1908. "The Anti-cyclonic Belt of the Southern Hemisphere," by Colonel H. E. Rawson, C.B., R.E.

exceptionally high; in fact, the means for 1887 and 1899 are the two highest which have been recorded since observations were commenced in 1873, and this phenomenon extended to individual months also. The mean monthly readings of pressure for May and June, 1899, were the highest ever recorded, and for May and June, 1887, the next highest; for November, 1887, and for November, 1899, the third highest, while for April and September in both years they were exceptionally high. The conditions over Natal in 1886, 1887, and 1888 were also markedly anti-cyclonic. Such a close resemblance between the two years led to the records of other stations on the same latitude as Durban being examined, and the conclusion was come to that the belt occupied the same position across South Africa in both years. From this the important deductions were drawn that for six years prior to 1893 the belt was moving northwards towards the equator, and for six years after 1893 it was travelling southwards, and, further, that its progressive movement in both directions was not irregular. The first definite conclusion regarding the latitude of the belt was accordingly reached, viz., that in 1887 and 1899 its central axis lay approximately over Latitude  $30^{\circ}$  across South Africa.

How far north it had travelled by the year 1893 could only be gathered from the fact that it was far enough to allow of the phenomenal rainfall which took place that year in Latitude  $30^{\circ}$ . In following up this point, an analysis made by Mr. D. E. Hutchins, the Conservator of Forests in Cape Colony, of all the droughts and special rainfalls which he could find in South Africa proved of great value. His object was to test the Meldrum Cycle and the sunspot theory, and he carried his inquiry from 1888 as far back as 1622. He endeavoured to fit them in with the sunspot theory, but was unable to find any place for a number of exceptional rainfalls in the Cape Peninsula. This led him to adopt for this part of South Africa a different cycle altogether, to which he gave the name of the "Storm Cycle," having a period of 9.5 years, or, by going back to 1622, the more accurate one of 9.43 years. He plotted the rainfall which had been registered at the Cape Observatory from 1841 to 1888 and found in the curve convincing proof of such a storm cycle over this district of South Africa, which, however, did not extend to Natal and the east. He detected the storm cycle readily at several stations along the latitude of about  $33^{\circ} 30'$ , but when he reached Latitude  $31^{\circ}$ , the cycle ceased to be apparent. The eastern rainfall north of this latitude was found to differ primarily from the Atlantic rainfall, and was only influenced by the storm cycle in the matter of wind. The storm cycle years of the S.W. district were stated by Mr. Hutchins to be 1850, 1859, 1869, 1878, and 1888. In all these years the rainfall in the Cape Peninsula was remarkably heavy.

But in the year 1887 we found that the belt was lying across South Africa approximately over Latitude  $30^{\circ}$ , and travelling northwards. In 1888, therefore, it would be somewhat north

of this, and this would be its position in the last of the storm cycle years discovered. It had travelled northwards till 1893, and in 1898 it had returned to very much the same position as in 1888. A cycle of 9.5 years would fit in exactly with what had been found to take place between 1887 and 1899. The belt must, therefore have been in the same position as we found it in during 1893, at intervals of either 19 years or 9.5 years, bringing exceptionally heavy rainfall to Durban in each case. A reference to the records put the matter beyond a doubt. The average rainfall there is 39.37 inches, but in the years 1855, 1874, and 1893 it was 82.82 inches, 55.06 inches, and 71.27 inches respectively. These might be called the storm cycle years of Durban, and the interval is 19 years.

But if the belt is only found in this northern position every 19 years (and the barometer records corroborated the rainfall records in this respect), it must move on southwards from the position it occupied in Mr. Hutchins' storm cycle years, and return to it again in 9.5 years. Evidences of such a movement were looked for in all available barometer and rainfall records, and just as the belt was traced arriving over Durban by the very high barometer that prevailed and by the persistent anti-cyclonic conditions, so it was traced lying approximately over the latitude of Cape Town, viz.,  $34^{\circ}$  S., in 1845, 1865, and 1884. In each of these years exceptionally high pressures were recorded at the Cape Observatory. For the month of June in these years the pressure was the highest, the third, and the fourth highest recorded during 65 years; and the annual means for 1845 and 1884 were the highest and the fifth highest respectively. Nineteen years after 1884, that is, in 1903, the mean annual pressure was the ninth highest, and the monthly means for February, March, and November were the first, seventh, and fourth highest during 65 years.

As regards the anti-cyclonic conditions which prevailed in these years, the records show that low rainfall and exceptionally severe droughts characterised them all. Mr. Hutchins describes the drought of 1882-1885 over the S.W. districts and the Cape Peninsula, as one of the most severe ever experienced. He records a drought round 1845 to which Livingstone in his "Travels" refers as one which lasted from 1842 to 1846. The years 1864, 1865, and 1866 were notable as being the three driest consecutive years which were recorded at Cape Town from 1841 to 1894, and the year 1903 was one of exceptionally severe drought.

All these facts support the view that just as the belt moved from the position which it occupied in the storm cycle years to its farthest position north and back again in 9.5 years, so it moved to its farthest position south and back again in the same period. Mr. Hutchins' storm cycle years are, in fact, those in which it occupied its mean cyclical position somewhat to the north of Latitude  $30^{\circ}$ . It moved from this to its extreme southerly position over Latitude  $34^{\circ}$ , or about  $4\frac{1}{2}^{\circ}$ , in a cycle of

9.5 years, and we may consequently put its extreme range at  $9^{\circ}$  to  $10^{\circ}$  approximately. In an isobaric chart for July which Buchan published in 1869, and in another chart for the same month, which Clement Ley published in 1894, the action centre is shown lying nearly centrally over Latitude  $24^{\circ}$ . This is the most northerly position I have found it occupying in any of the charts, and it agrees in a remarkable way with what has been arrived at altogether independently.

The following table is a first approximation to the positions of the belt as it performs its oscillation in a 19-year interval:—

TABLE I.—*Cyclical Movements of the Belt, and Years of Reaching its Extreme and Mean Positions.*

Anticyclonic Belt.	Latitude.	Years.	Interval.
Extreme Northerly Position	$24\frac{1}{2}^{\circ}$ S.	1855, 1874, 1893 ... ..	19 yrs.
Mean Position ... ..	$29\frac{1}{2}^{\circ}$ S.	1850, 1859, 1869, 1878, 1888, 1898	9.5 yrs.
Extreme Southerly Position	$34^{\circ}$ S.	1845, 1865, 1884, 1903 ... ..	19 yrs.

Our examination of South African records has so far fully confirmed the view that the anti-cyclonic belt in which anti-cyclonic systems are moving is not in the same latitudes in succeeding years, and in Table I. an attempt has been made to point out the years in which it was north and those in which it was south of its mean position across South Africa. In the Admiralty Manual, "Africa Pilot," valuable information is given as to the latitudes in which gales are likely to be met at different seasons of the year. Such gales are influenced by the position of the belt, and if Table I. should be confirmed it will be possible for the Admiralty to issue in advance much fuller information regarding them than can be done at present.

We have dealt up to the present with South African weather only, but if such an oscillation of the belt has been taking place the character of the weather in Australia and in South America must have shown the existence of a 19-year cycle equally with South Africa. On turning to Australian meteorological records we find that as far back as the year 1846 a 19-year cycle was detected by the Rev. W. B. Clarke, who from 1839 onwards kept observations prior to a Government observatory being opened. Moreover, that Mr. F. C. Russell, F.R.S., the Government astronomer for New South Wales, subsequently elaborated the theory, and in an analysis of the years 1872-1896 pointed out the 19-year cycle contained in them. It is remarkable that the years which he describes as years of drought are the very years when the belt, according to what we have found taking place in South Africa, was at the extreme end of its oscillation, viz., 1874-1877, 1883-1887, and 1894-1896. In these years the belt



would be passing back again for the second time over districts which had already experienced dry, anti-cyclonic weather.

As regards South America, Dr. W. J. S. Lockyer contributed a paper to the Royal Society in 1906 on "Barometric Variations of Long Duration over Large Areas," in which he discussed the barometric pressure over the Argentine Republic, Chili, and Brazil. He states as one of his conclusions that the interval between the South American *principal* maxima is about 19 years, and in the curve which he has drawn for the period from 1867 to 1902 the maxima occurred in the years 1874 and 1893. He drew his materials for the curve from stations between Latitudes  $31^{\circ}$  S. and  $34^{\circ}$  S., and I would remind you that the years are the same as those in which the belt attained its most northerly position across South Africa.

The evidence from both Australia and South America, therefore, is strongly in favour of a 19-year cycle, and it can be satisfactorily explained by the oscillation of the anti-cyclonic belt which has been found to be taking place over South Africa.

It is not possible that such an oscillation, amounting to  $9^{\circ}$  or  $10^{\circ}$  of latitude, could take place without districts outside the belt showing it as well as those within it, and it seemed probable that the equatorial rain belt to the north would be found shifting its position also. Some recent publications of the Director of the Egyptian Survey Department enable this point to be followed up. He has discussed in considerable detail the seasonal movements of the equatorial rain belt and the resulting rainfall over the Upper Nile basin. The following table is compiled from the figures which he gives regarding the ratios of the Nile floods which occurred each year from 1869 to 1905, to the mean flood for a period of 34 years:—

TABLE II.—*Ratios of Annual Nile Floods to Mean Flood.*

1st Series	1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	Remarks
Floods	1.18	1.23	1.05	1.11	0.84	1.26	1.10	1.09	0.70	1.25	1.14	In excess
2nd Series	1880	1881	1882	1883	1884	1885	1886	1887	1888			Remarks
Floods	0.98	0.93	0.84	1.04	0.83	0.99	0.91	1.19	0.72			Deficient
3rd Series	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898		Remarks
Floods	1.00	1.12	1.01	1.20	0.99	1.22	1.15	1.06	0.89	1.07		In excess
4th Series	1899	1900	1901	1902	1903	1904	1905					Remarks
Floods	0.63	0.89	0.87	0.63	0.89	0.75	0.65					Deficient

In this Table the period 1869 to 1905 is seen to divide itself naturally into four series in which the floods were either deficient or in excess of a mean flood. The first series, 1869-1879, and the third series, 1889-1898, consisted of floods which were in excess, while the second series, 1880-1888, and the fourth series, 1899-1905, consisted of those which were deficient. Comparing Tables I. and II., the first and third series are found to corres-

pond with remarkable exactness to the years when the southern anti-cyclonic belt was north of its mean position, while the second and fourth series contain only years when the belt was south of it. The evidence is strongly in favour of the equatorial belt shifting its latitude in harmony with the anti-cyclonic belt and influencing the rainfall in the Upper Nile basin. A connection between the variations in the Nile floods and the rainfall in India has already been pointed out by Sir J. Eliot, Sir Norman Lockyer, and others, and we may look forward with confidence to a relation being traced between the shifting of the equatorial belt and the movements of the anti-cyclonic belt of the Northern Hemisphere.

For such a novel theory as a cyclical shifting of the two great high-pressure belts which lie north and south of the equator, we fortunately have an analogy in the case of Jupiter's belts. The Jupiter section of the British Astronomical Association has been investigating their movements, and has established conclusively that they shift their latitudes. On each side of the equator and approximately parallel to it, two important belts or bands can be traced, which in some years close in towards one another until the equatorial band itself is obscured, and in others open out from one another. In 1898 they were found to be closer to one another than in any other year from 1891 to 1904, and after 1898 they moved outwards to positions very similar to those they occupied in 1891, when they were furthest apart. It is significant that in 1898 Jupiter was at its greatest distance from the sun, while in 1891 it was nearest to it. This suggests that we may find the positions of our belts affected during periods of minima and maxima sunspots, but the analogy between our belts and those of Jupiter cannot be pushed far.

In conclusion, the new principle of weather forecasting which I wish to bring to your notice is the cyclical oscillation of the anti-cyclonic belts of the Northern and Southern Hemispheres and the seasonal movements of the high-pressure systems within them. The weather belonging to the types I have shown you is known, and we have seen how intimately they are associated with the belt; how V-depressions insert themselves into a col between two anticyclones, and how a wedge extends itself from the belt into an area of low pressure adjoining it. In both hemispheres cyclones tend to roll along the polar side of the belt, and Mr. Russell's diagram showed how they follow its oscillations. With such information the position of the belt and the direction of its oscillation will enable us to forecast the general character of the weather over the wide areas which are controlled by it, without having to refer to a mass of statistics and to many years' observations.

There is a very large amount of work to be done before the views that have been advanced and the suggestions which arise out of them can be said to be established; but in helping to test them you may advance our general knowledge in some unexpected way. Already there are strong grounds for

thinking that in the Southern Hemisphere icebergs and drift-ice are met with farther north in those years in which the anti-cyclonic belt is farthest north. Such a fact is of great importance, not only in Antarctic exploration, but to all ships sailing in high latitudes, and its proof would well repay the labour spent upon its investigation. And the subject is not exhausted when the principle becomes established, for the law underlying it still remains to be discovered.

W. N. SHAW, LL.D., F.R.S. (Director of the Meteorological Office):—It is with very much pleasure that I have come this afternoon to welcome a fellow worker in meteorology, and one so enthusiastic and so successful as Colonel Rawson, and to congratulate him, among other things, upon having laid his attack in a field in which there is an enormous amount to be learned, and of which at present we have, from the ordinary sources, very little information—I mean the meteorology of South Africa. It is rather astonishing, considering how much time the United Services spent some little time ago in South Africa, how little is our organised and reduced knowledge of the meteorological statistics of that country. I should like, however, in the first place to say a word on Colonel Rawson's first sentence. He says: "The omission of meteorology from the syllabus of our studies can only be justified on the ground that weather forecasts cannot be made sufficiently far in advance to be of practical use." I am afraid I think that the omission of meteorology from the syllabus of our studies cannot be justified upon any grounds. If Colonel Rawson seeks the use of forecasting as a sufficient and satisfactory reason to bring an interesting meteorological paper before the United Service Institution, I have no objection; but I am bound to say that there are other claims of meteorology upon the Services than its utility in forecasting—a comparatively modern development of it. I should suppose that for the Navy, for example, and for shipping generally, the knowledge of the trade winds, the monsoons, and perhaps the Newfoundland Banks, have been in the history of the world more important than the knowledge of forecasting. And in a country like Africa, the country which Colonel Rawson has brought specially to our notice, it seems to me that for an Army the fact that there one has to treat water much in the same way as in this country we treat methylated spirit on account of the extraordinary rapidity of evaporation, and the fact that in the greater part of the highlands of the country water boils at  $207^{\circ}$  instead of  $212^{\circ}$ , and therefore the making of tea presents peculiar difficulties, I should have thought that those facts are as important to an Army as can possibly be the successful forecasting even of a season's weather, because after all the Army has, in ordinary circumstances, to be prepared for weather of various kinds. However, I do not wish to depreciate the advantage of forecasting; I only wish to say that in my opinion there are only two reasons imaginable for leaving meteorology out of the syllabus. One is that it is of no importance, and the second, equally effective, is that we know all about it. With regard to the first, that it is of no importance, the fact that modern meteorology practically dates back to the calamities of the Crimea is sufficient evidence; I need not go into that. And it would be absurd for me to say that we know all about it, because even such accomplished meteorologists as the lecturer and myself—if I may be pardoned for using that phrase—are even now in want of teaching to this extent, that we use terms in slightly different senses. I was struck with the sense in which the lecturer used

"action centres." It was to me a new one, and I was very glad to see that in the course of his remarks he pointed out an action centre. It is a little different from the *centres d'action* of MM. Teisserenc de Bort and Hildebrandsson, who used the phrase some time ago. Further evidence that we do not know all about it is to be drawn from the fact that we have spent not the whole but only a part of the time placed at the lecturer's disposal in discussing special features of the movements of anti-cyclones and a considerable part was spent in explaining some of the terms which ought to be familiar to all those who know a little about meteorology. Consequently I wish to demur quite strongly to the idea that there are sufficient reasons for leaving the subject of meteorology out of the syllabus. If I may be pardoned for taking up another minute or two of your time, I should like to say that the variations in the position of the anti-cyclonic belt that the lecturer has brought to our notice are extremely interesting and very valuable. He has not actually given in set terms his means of applying the principle of forecasting for the use of the Army or the Navy. Presumably he means that to depend upon the nineteen years' periodicity with which he finished up, and leaves those concerned to apply the idea of the nineteen years' periodicity to foretell the weather of a particular area according to the cycle. That suggestion is very interesting. Nineteen has been suggested with reference to cycles of weather several times. I feel sure the lecturer would agree that his most interesting groupings of the results are a suggestion that investigation should proceed, rather than an intimation that the investigation is completed, or that the period of nineteen years which he has suggested is finally or ultimately conclusive. Variations in these things take place, and further investigation is almost necessary; I need not go into details. I would only say that what he has brought before us this afternoon is a suggestion and an indication that he looks forward with anticipation to the investigation of the meteorological work over very wide areas, and many other meteorologists would support him. In this connection I ought to mention, as Colonel Rawson has mentioned, the work that is being done by Sir Norman Lockyer and Dr. Lockyer in collecting together meteorological statistics from all parts of the world. There is, as a matter of fact, a Solar Commission, a branch of the International Meteorological Committee, which was formed to support Sir Norman Lockyer in that undertaking, and endeavours are being made to collect *data* from all over the world which will enable everyone to trace the motions and the main features of these anti-cyclonic belts with greater precision in the future. Progress is very slow. The British Empire is, as a matter of fact, particularly behindhand in supplying *data* from some interesting points which belong to the British Crown. I have taken advantage of the opportunity of the official meteorologists of Australia and the Cape being present in this country recently to see whether I could not arrange with them to make a periodical publication of *data* for the British Empire, beginning with the Cape, Australia, possibly Canada and this country, which might gradually extend, and easily give Colonel Rawson the *data* for further work. Further, I would like to say that no study of this kind would be complete unless one goes over the sea. The Hydrographer will bear me out that we are conscious of that at the Meteorological Office, and intend in future to endeavour not only to put together the *data* from mean values, but to put *data* together year by year and month by month, so that we shall be able to detect the variations from the mean values for the year or for the month, which Colonel Rawson has shown to be so useful, when they are put together intelligently and homogeneously.

Dr. W. J. S. LOCKYER, M.A., F.R.A.S.:—Colonel Rawson, in this most interesting paper, has, I think, brought together a series of facts which have instructed us very much indeed, and myself perhaps more particularly because he has been treating meteorology as a world and not as a local subject, such as Great Britain or any particular country. For the last two years I have been busy discussing Australia meteorologically, and incidentally I have become familiar with Colonel Rawson's papers, which have been of great help in many ways. In his paper of to-day he refers to Mr. Russell's work in Australia, and he also states that the anti-cyclonic belt not only has an annual swing but also one occurring over several years. I have up till now regarded that swing as gospel truth for all time. When I came across the annual values of these latitudes of anti-cyclones I found the difference between the greatest and the least mean latitude was only  $3^{\circ}$ , and I came to the conclusion that we could not really say there was a variation in the belt in addition to the annual variation. By arranging the figures in another way I discovered that there was a swing in the belt, and a very considerable swing, but the swing is quite different from that to which the lecturer alluded. In my way of explaining this matter, the belt expands and contracts, while Colonel Rawson's belt goes up and down in latitude. We get nearly the same result in the end, but it is a question of a different explanation. My view is rather corroborated by the fact that when the swing, the oscillation, was greatest, the pressure in Australia was least, and that is the time when you would expect anti-cyclones, when they are small, to be moved up and down in latitude. But when you have great anti-cyclones, like there are in Australia in high-pressure years, it must take a great deal of force to move them out of their tracks, and it is in those years that the oscillation about a mean position is small. Thus the increase and decrease in the anti-cyclonic belt that is the track of the anti-cyclones over Australia, seems to me to be due to the greater increase and decrease periodically of the anti-cyclones themselves, and not so much to the absolute movement of the belt in a north or south latitude. So far as I am aware the *data* for such an investigation are only available for Australia. Colonel Rawson has worked them out for South Africa. I do not quite know how he has done it, but he has evidently come to a very different result from that which I have obtained for Australia. However, the investigation is of great interest because I think we have the same conditions going on in South America, South Africa, and Australia. It is rather against, at any rate, my view to think we have one thing going on in Australia and another thing going on in South Africa. Reading through the paper, I consider the movement of this belt may be explained on the assumption that it is not the belt so much moving up and down but the belt getting broader and narrower, and this would be explained by the anti-cyclones being bigger in some years and smaller in others, like they are actually in Australia in some years. This is one of many points in a most interesting paper, which I am very glad to have been able to be present to hear read.

Major-General J. B. RICHARDSON, R.A.:—May I just ask Colonel Rawson a question? I could not quite make out whether the northern and southern anti-cyclonic belts agreed in any way in the nineteen years interval, or whether that has been traced at all. Then I should like to know whether they tend to meet or fend to part. When the southern belt goes up, or expands as Dr. Lockyer just called it, does the northern belt expand at the same time?

Captain JOHNSTONE:—I should like to ask Colonel Rawson whether there is any connection between the pressure in the anti-cyclone that would



give any information as to how far off the centre of the anti-cyclone is, and will the low pressure of the anti-cyclone give any idea of the radius of the cyclone?

Colonel RAWSON, in reply, said:—The first direct question asked me was the most interesting to me of any, and I wish I could answer it one way or the other. It was whether the belts in the north and south hemispheres worked in what one might call a like phase; whether they swing together, or whether, as we see in the case of Jupiter's belts, they move inwards to the Equator and then outwards. It will require a great deal more observation and looking into facts before that question can be answered; but the facts are there for us to learn which they are doing. I have only a hazy idea of what occurs. I do not know whether it is an oscillation of the two in the same direction, or whether, as Dr. Lockyer would put it, it is the expansion of the two simultaneously, so that they work towards one another for a series of years and then contract away from one another for another set of years. I have not formed an opinion yet on this subject on which I am still working. And a very interesting subject it is, because in the tracing of these belts as they pass over areas, somehow or other once you begin you cannot leave them alone. You find that lakes vary their levels, for instance. In the case of the Australian lakes the way in which they alter their levels in time with the belt's swing or change of position is quite extraordinary; and if you consult Brückner's series of records of the rise and fall of lakes, the way many of them alter their levels in accordance with the swing is quite surprising. Whether the two belts are swinging together or swinging in opposite phases I really have not made up my mind; but I am studying that subject at the present moment. Then I was asked: Is there anything to indicate what the radius of the anti-cyclone is, and the distance which storms will be kept away by an anti-cyclonic belt? I do not think that question has ever been investigated, though Van Bebber and Köppen's types partially deal with it. The nearest answer I can give to it is this: Look at the way in which storms pass across Cape Town and the Cape Peninsula when the centre of the belt is just  $4^{\circ}$  north. The size of an anti-cyclone might vary from 50 miles to 4,000 miles; the range is very large. An anti-cyclone may be very small, a travelling anti-cyclone especially, or it may be enormous, covering, for instance, the whole Atlantic—3,000 miles one way and 2,000 miles another. Either anti-cyclone would ward off cyclones from a district; but there is a great difference, as I explained, in them. There are almost two different classes of anti-cyclones, one the travelling anti-cyclone and the other the stationary anti-cyclonic system, like the so-called permanent Siberian and American systems. How far off storms would be repelled was also suggested by Russell's diagram, which showed the tracks that the cyclones were forced by the belt to take in different seasons of the year; but I am afraid we cannot get much nearer than that. Then the very important question was asked as to how we are to forecast the weather with this law of the oscillation of the belts. I began my lecture by pointing out that forecasting weather has been in the past so difficult because of our having to refer to a mass of statistics and owing to the necessity of having to carry those statistics always about with us. If the suggestion I now make turns out to be true, you would bear in mind the position of the belt. Last year's bad weather in July, let us say, was due to the belt being in such a position in regard to Great Britain that the cyclones were passing freely across it; the belt then, owing to its seasonal swing or the system forming part of the belt, went a little farther north,

and our fine weather in September was due to the belt being over us, whereas this year in July the bad weather was kept off and the storms were warded off by the belt occupying a position more over us. In the first week of September this year we had about as bad weather as we have had lately, and it was followed by a remarkable October of persistent anti-cyclonic weather, looking as if the belt came north a little bit earlier, and that it went south a little bit later. Without going into technical details, that is one illustration of how to use the law. Keeping in mind the oscillation of the belt, one would argue that a certain class of weather would be found over certain latitudes in one year and next year the weather would be either a little better or a little worse, according as the belt and its component systems were moving one way or the other. When these are worked out for us it will enable us to approximate more closely to the weather. It is by having a ready rule of this sort that I think we shall benefit—by having something which we can carry in our heads—that the belt is not in the same latitude in succeeding years, but is either pushing north or pushing south. If it is at the end of its swing, it will hang about certain latitudes for a longer period, and the weather in successive years will be more alike. That will occur only at the ends of the swing. I hope Dr. Shaw is going to tell us on some future occasion which way the belt moves, and whether its change of position is due to an expansion and contraction or to an oscillation. I trust that will soon be proved for us, and that we shall get a little bit further forward with our laws of weather. It was in the hope that this paper would add to our knowledge on this important subject that I have ventured to appear and address you to-day.

The CHAIRMAN (Rear-Admiral A. M. Field):—I think we are all much indebted to Colonel Rawson for bringing a subject of such great interest before us this afternoon, and to those speakers who have taken part in the very interesting discussion to which the lecture has given rise. The distribution of atmospheric pressure is undoubtedly the determining cause of the whole range of weather, and the permanent anti-cyclonic systems must exercise the greatest possible controlling influence over that. The conception that various regions have this cyclical movement which the lecturer has referred to besides a seasonal oscillation, may give us a clue which will assist in unravelling a great deal that is obscure to us at present. Colonel Rawson is, I think, to be congratulated upon having broached new ground in showing that there is reasonable cause to suspect the existence of such movements. The synoptic charts that are now published have placed means at our disposal by which the movements of atmospheric pressure may be traced and studied. The lecturer has dealt mainly with the cyclical movements of the high pressure belt in the southern hemisphere in establishing this position. The conditions in those regions are much more stable than elsewhere, and he has been enabled to trace movements and lead us to the remarkable conclusion of the occurrence of the nineteen year period. This fits in in a remarkable way with the independent conclusions of Dr. Lockyer and the late Mr. Russell, who made observations over a long period in Australia. The variation in the annual Nile floods appears also to lend additional confirmation to the conclusions drawn by the lecturer. But I think, on the other hand, too much reliance should not be placed on results arrived at from comparing charts of very varying values. The charts which have been referred to are not of equal value by any means, and it is, perhaps, doubtful whether sound conclusions can be drawn from them. There is certainly, however,

a considerable amount of cumulative evidence in favour of the lecturer's views, although the evidence from any particular point may not be overwhelmingly strong. Still, it derives force from being reinforced from several different points of view. The bearing of weather forecasting on naval and military operations has not been referred to at any great length, but that it has a very important bearing upon such operations cannot be denied. Mr. Bentley, in his Presidential Address to the Royal Meteorological Society two years ago, treated that subject very fully, and traced the effects of weather on naval and military operations from the earliest times down to the present. He gave no less than two hundred and forty instances of military operations, and a hundred and twenty of naval operations, in which weather played a most important part. So far as sea-faring people are concerned, weather always plays a most important part. The lecturer has also referred to the connection between icebergs and drift ice in the southern hemisphere with the movement of the anti-cyclonic belt. For the benefit of seamen navigating those waters we publish an ice chart, giving all the information which is available; but it would be a great step in advance if we could supplement that information by a forecast as to the probable distribution of ice based on scientific reasoning. Similarly, the information now given in the "African Pilot" concerning the latitude in which gales may be expected at different seasons, which has been referred to, is based on observations extending over many years; and without the guide afforded by the knowledge of the existence of a cyclical period, observations of one part of a cycle may have been combined with those of a different cycle. If this period can be considered as established, it would certainly entail reconsideration of the data on which our published results are founded. These are some of the directions in which practical results might follow a recognition of the new principles which Colonel Rawson has brought before us. The subject has been very clearly and fully explained by the lecturer this afternoon, and it is certainly one that requires much further investigation. I am sure that I may, in your name, return a hearty vote of thanks to Colonel Rawson for the very interesting lecture he has given us.

## SOME NOTES ON MODERN TACTICS.

By Brevet Major W. D. BIRD, D.S.O., *The Queen's*  
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IN a boxing contest, when the men are of approximately equal strength and skill, both alternately attack and defend; when ill matched, one is mainly on the defensive, though at times attacking.

In these respects battles may be said to resemble glove fights, but as no two boxing matches can be alike in details, so no two battles can be similar, and, in the battlefield, the difference is accentuated by the factors of topography, climate, supply, etc.

Battles may be divided into two categories: the first when both sides possess approximately equal force; the second, when one is preponderantly stronger.

In the first case both may be expected to attack, and though, in the course of the action, a greater or less proportion of the troops on either side will, according to the fortunes of the field, be thrown on the defensive, still, the main object of each combatant will be attack.

In the second class, the weaker will, by skilful use of ground, by field fortification, by mobility, endeavour to economise force in one portion of the battle ground, in order that, in another, he may possess, if not preponderance, at least equality.

The action of the weaker will, therefore, take the form of offensive-defensive as opposed to the unqualified offensive of the stronger. But the latter, even if not finally defeated, may, in certain localities, be temporarily thrown on the defensive.

A great battle between two armies is the natural culmination of the strategical deployment, and of the direction in which the troops are afterwards launched.

A large army will occupy so considerable a frontage if its formation is linear, or depth and frontage if moving in *échelon* or lozenge shape, that the exigencies of time and space will preclude any sweeping changes of formation once the forward movement is commenced.

Hence, the order of deployment will, in a marked degree, remain the order of battle, with the modification that the troops will, in the latter, occupy a more restricted frontage.

Since a reserve is only advantageous if so situated that it can be used whenever required, the employment of a central reserve to a formation in other respects linear or *échelon* is precluded, for such body cannot, as a rule, come into action until after a march of many miles, and during this interval the situation may have so radically altered that it may not only be too late, but its presence may be required in quite another locality.

When an army is marching in line or *échelon* of masses, it is better, therefore, to place all troops from the beginning of the fight, where they will be finally employed, trusting to the effect of vigorous pressure to oblige the enemy to conform to our movements. This arrangement, moreover, is in accord with the general principle of linear action, which seeks to attain victory by simultaneous and convergent pressure, and is also suitable to *échelon*.

Even if the army is arranged in lozenge shape, which implies that a fraction is held back behind the remainder, and that success is to be sought from successive but continuous development of force, it is clear that the direction in which this fraction is to be deployed must, if the greatest advantage is to be gained from its presence, be decided soon after close contact is established with the enemy, or the stroke may fall too late.

In other words, whether advancing in linear, *échelon*, or lozenge formation a large army must march in close approximation to its battle order, and the grand tactics of the attacker in modern war will more nearly resemble strategy than the conception of a general engagement, followed by a decisive stroke by the reserve in whichever locality the course of the battle has shown to be most favourable.

For similar reasons, when the offensive-defensive is adopted, the direction of the counterstroke must be pre-arranged, and the troops disposed accordingly.

In minor tactics, however, considerations of time and space will usually permit the retention of a reserve, to be employed, after the enemy has been forced to show his hand, as circumstances may demand.

In grand tactics, then, there will be little distinction between the local operations of one or other division or corps, for all will exercise, on the enemy, the greatest possible pressure, so as to mar his plans, though the troops on the flanks will endeavour to envelop rather than to break the enemy's line.

But, in minor tactics, the units first committed to action will fight in order to force the enemy to expose his dispositions and absorb his local reserves, when an opportunity will be offered for the employment of their own reserves.

When two modern armies advance to meet one another, as did the French and Austrians at Marengo and Eckmühl, and the French and Allies at Lützen, each will be preceded by a force of cavalry sent ahead to discover the position and direction of march of the enemy's main body, and the forward movement of each will be screened and protected by another group of horsemen, so as to allow to the strategical cavalry a free hand to manoeuvre.

It is in the nature of things that, sooner or later, the two strategical cavalries will meet and fight for mastery, and that, until one or other has gained complete victory, a state of mutual attraction and neutralisation will supervene. In such circumstances it would seem that the protective cavalry will tend to be drawn into the area of the operations of the strategical cavalry,



for both sides will call up every possible reinforcement, and the protection of the main armies will therefore fall to the advanced guards.

If the cavalry of one side succeed in gaining some important success, the rôle of the defeated will, with the assistance of the other arms, be still to so far menace and contain the victors, as to prevent them, at the risk of defeat in detail, from initiating other operations.

Complete success in the cavalry fight will leave the victor free to commence whatever undertakings seem best calculated to further the general plan of campaign, and these, after requisite information of the movements of the enemy's infantry has been obtained, and arrangements have been made to watch them closely, may include attack of the hostile columns with the object of delaying them, or an enterprise against the enemy's line of supply. But, as a general principle, cavalry should undertake nothing calculated to prejudice its mobility, and power to strike hard and quickly in any given direction, nor should its efforts be directed so far from the probable field of battle that their effect will not immediately be felt.

No matter what may be the position of the strategical and protective cavalry, and of the special reconnoitring and other detachments sent out by these troops, both armies will, in addition, be preceded by advanced guards.

Since neither the mass of cavalry, owing to the opposition of the hostile horsemen, nor the reconnoitring detachments, by reason of their weakness or of the enemy's vigilance, may be able to procure adequate intelligence of his dispositions, this duty may become one of the principal functions of the advanced guard or guards, according as the formation of the army is linear, *échelon*, or *lozenge*.

In the latter cases the leading group will form a general advanced guard to the remainder; but in the linear form, a wider frontage will be under close observation, and there will, perhaps, be less risk of defeat in detail.

Since advanced guards are required to gain information, and will certainly have to fight for it, they must consist of the three arms and be of sufficient strength to hold their own until reinforced, should they find themselves involved with superior forces.

In a modern battle the Commander-in-Chief will remain in some convenient position, sufficiently removed from the temptation to see events with his own eyes but near enough to the field to quickly receive news of the fight. He will, therefore, watch the fight through the medium of the reports of his staff and commanders, content to supervise by indicating when and where special pressure is to be brought to bear, rather than to direct.

The divisional and corps leaders, on the other hand, will ride forward to some locality whence they can observe and draw conclusions from the action of their advanced troops.

These generals may be followed by their artillery, which will halt in covered positions, whilst the brigade commanders take stock of the situation and topography, order necessary reconnaissance of routes and localities to be made, and, if necessary and desirable, the construction of artificial cover in possible fire positions.

As the action develops, the divisional or corps leader will be able to judge the areas where his artillery can be most favourably disposed, and the guns will be moved in these directions by covered lines.

Probably, at first, guns will fire from concealed positions, or from earth cover previously thrown up, but in the later stages of the fight it may be necessary and possible to serve the guns in the open.

The corps or divisional commander may retain a portion of his artillery in hand as a reserve of fire or to meet casualties, but the desire for concentration of effort, and the long range of modern guns, which enables them to bring, from a wide frontage, fire to bear on any given locality will usually tend to their early employment.

Once in position and subject to the general instructions of the corps or divisional commander and to specific orders to move towards or concentrate fire on any given locality, the guns must be fought by the artillery officers, whose aim will be to co-operate, to the greatest advantage, in the infantry attack. Whether fire is directed on the enemy's artillery, on his infantry, or on both, will depend on the local situation. Since the enemy's artillery will rarely be completely silenced, the guns will, as a rule, shell both hostile artillery and infantry, directing fire mainly on the latter, subject to the condition that the artillery fire against our guns must not be permitted to become overwhelming.

The artillery having been disposed of, the infantry of the main bodies, as it arrives, will be pushed forward into the fight, and in greatest strength towards localities more easy of approach or tactically more important; but as small a force as is consistent with the attainment of the immediate purpose will be engaged.

Such infantry units as are not, for the moment, required in front, may, with the technical troops, be usefully employed in putting into a state of defence the ground where they are halted.

The divisional or corps cavalry will, when the action has joined, have fallen back, and the portions not utilised for maintenance of communication, for security of flanks, for reconnaissance, etc., can either be retained in reserve, or placed in a position or positions of expectation, in localities well adapted to mounted action.

Owing to the extended frontage on which the battle will take place, pressure in one locality will usually be best and most quickly relieved, not by direct assistance, but by counter-pressure on some other place, more especially if of importance

to the enemy, and on this principle both Commander-in-Chief, and local leaders, who will mutually be in close inter-communication, will direct their operations.

In addition to watching and supervising movements, the Commander-in-Chief and other generals will give careful thought to administration, and a portion of the staffs will be fully occupied in organising supply of ammunition, removal of wounded, distribution of rations and water, as from the perfection of these arrangements much will depend.

And so the battle will continue, both combatants gradually expending their force, until one side or other becomes exhausted, until a disaster in some locality necessitates the retirement of the remainder, or until the whole or a portion of one army is enveloped by the other.

A battle may, however, take another form, in circumstances when one side intrenches and awaits the other, and in such case both preliminaries and details may vary somewhat from the example already considered.

The employment of the strategical, and even of the protective cavalry will not probably be very different, but the course of the action in the other introductory phases will depend on whether the defender covers his position with advanced guards, and so takes up false fronts, or whether he merely throws forward a weak screen or line of outposts.

The advantages claimed for the former method are that the enemy may be exhausted and forced to deploy prematurely; the drawback is that the defender will commence the battle with the moral disadvantage of retirement by part of his force, which may be followed by the attacker right into the prepared position.

If the first method is adopted, the earlier stages of the battle may take the form already discussed, except that, since the defender will be stationary, or even prone to give way early, it should not be so difficult for the attacker to form a correct opinion of the situation.

In the second case, the advanced guard commander or commanders, may be forced to engage their troops with more circumspection, in order to avoid the risk of defeat in detail.

Since, too, such of the artillery and infantry of the defender as are in position will be under cover, natural or artificial, and will possess knowledge of ranges, troops attacking these localities will be obliged, at first, to act with vigour, tempered by caution.

But the units, on the one side, undertaking enveloping movements or turning operations, and those on the other, delivering the great counter-attack, may adopt the procedure outlined in the case when both sides advance to meet one another.

In regard to the occupation of a position, it is a truism that portions too inaccessible, either owing to natural features, or to the art of the engineer, will defeat their own purpose, for if the attacker cannot approach, neither can the defender issue from them, and the former will therefore be able to contain the

occupants with a few troops, diverting those thus economised to other parts of the field.

Whether local counter-attacks should be made from the intrenched position is, perhaps, doubtful.

Often an attacker, by following troops who have delivered a local counter-attack, has succeeded in obtaining a footing in localities previously found impregnable.

On the other hand, a too passive resistance is harmful to the *morale* of the defender, and permits the assailant's errors to go unpunished.

The question is, therefore, one for decision according to the exigencies of the moment; but it would seem that the attacker should not be allowed to mass troops, undisturbed, within assaulting distance of any locality, nor, without an effort to evict him, to establish himself on ground gained by assault.

Whether all available troops should deliver a local counter-attack, or whether it should be made only by supports and reserves, without direct assistance from the firing line, is again a moot point.

If the first method is adopted, and the attack fails, no troops remain to meet the enemy's pursuit; but under the second system, failure may result from want of force, and the firing line may be swept away in the subsequent rout.

It would appear, then, that the former plan possesses fewest drawbacks.

The attitude of commanders of all grades will not differ, in this type of battle, from that in an action when both advance. But the defender will possess this advantage, that his arrangements for ammunition and food supply, for removal of wounded, etc., and even as to possible retreat, can be made before the battle is joined.

No battle can be really decisive unless a large portion of the enemy's army is captured, or so effectually dispersed, that, for some time, it will be of no value.

These ends can be attained either by enveloping the whole or part of the enemy's army, or by effective pursuit.

When successful, envelopment is decisive without further operations, but a victory of this nature demands considerable superiority of force. When partially successful, a considerable victory is gained, but troops, owing to the position of the wings, will not be well placed for pursuit, and the flanks will be lent to the enemy, who will, however, probably be incapable of availing himself of the opportunity.

If envelopment is abortive, the attacker will lend one or both flanks to his opponent, and will be without fresh troops to meet a counter-offensive.

Pursuit is seldom effective unless undertaken by the three arms, for cavalry and horse artillery, however well handled, will hardly be a match for large bodies of infantry with guns, unless the foot soldiers are demoralised.

But, in a well-fought action, all available infantry will usually be employed, and troops who have fought hard are rarely in condition to undertake new efforts, and to face fresh dangers; hence, effective pursuit will, as a rule, only be practicable when the victor has possessed unusual preponderance of force.

Even when pursuit is possible, and the enemy can be forced off his line of supply, the fruits of victory are not so immediately and certainly reaped as when the opponent is surrounded; consequently, in spite of its disadvantages, envelopment will be the probable aim of the stronger combatant.

Indirect pursuit, which attempts to head off the enemy, should be combined with direct pursuit, and the former will fall to the lot of the cavalry of the victor, always provided that the horsemen of the defeated army can be shaken off.



## THE RÔLE OF HEAVY ARTILLERY: ITS EMPLOYMENT IN THE FIELD AND ITS CONSEQUENT POSITION ON THE MARCH.

*By Major P. de S. BURNEY, R.G.A., Commanding  
35th Heavy Battery.*

IT would seem quite easy to pick up the Drill Book and to satisfy one's curiosity on the above title at once; yet such is not the case, and the more manœuvres there are in which Heavy Artillery is concerned, the more does this become apparent. General Haking gave a lecture at the R.A. Institute last November, in which he explained that the infantry had four stages in their attack, and that during those stages they looked to the artillery for quite different classes of support. The first stage was the advance from within artillery range to within infantry range, *i.e.*, from about 4 miles from the defenders' position to about 1,800 yards.

Second stage, from there to the assembly position or fighting position, about 800 yards from the defenders' line.

Third stage, from the fighting position to the assault position, say 100 or 200 yards from the defenders' line.

Fourth stage, the assault.

He asked the artillery of the attack in the first stage to take on the enemy's artillery as it disclosed itself, and so to occupy his attention as to divert it from the infantry. In the second stage he required part of the artillery to bear on the defenders' infantry and keep down the rifle fire at times where it impeded the advance. In the third stage he wanted the whole of the artillery fire to be turned on to the defenders' infantry just at the right moment, *i.e.*, just when the attacking infantry moved forward piece by piece until it reached the assault position. From there he seemed a little doubtful about the friendly artillery fire. He feared that the first shells that burst, doing damage to their own advancing infantry, might cause that infantry to hesitate. If, however, the fire could be kept from injuring its own infantry, then, I take it, that such a pandemonium of shell fire should be poured on the still surviving defending infantry that the assault may prove a success. This fire cannot, on account of the supply of ammunition, go on for long, and must

therefore "come off" just at the right time. I take it from General Haking's lecture that he practically invites artillery officers to say "how this is to be done." Both the artillery and infantry Drill Books are practically silent on this point, and although I have had the pleasure of attending the last five years' manoeuvres and the consequent conferences, I have never heard the G.O. C.-in-C. yet say anything except that he thought this matter required practice and consideration. Many ideas have been launched out as probably calculated to solve the difficulty, but as yet no G.O. C.-in-C. has been satisfied with the result. This shows what a very difficult question the employment of artillery in the field must be, and its consequent co-operation with the infantry, and perhaps it is to this that we must attribute the fact that the use of Heavy Artillery has gradually become neglected, until at the last manoeuvres it was scarcely (advisedly) used at all. Let us review as many of the suggestions made as I can remember. The first was to push sections forward to advanced positions under cover, and at the crucial moment to run the guns up to a crest position to support the infantry attack. Another was to ear-mark certain batteries that would press forward, after the defenders' artillery had been dealt with, to advanced positions to support the infantry. A third was to keep up communication between the infantry and the artillery in their first positions by means of signalling or by telephone. The experience of recent wars has been to teach us that a battery once in action (except in a covered position) can seldom move. Practice at manoeuvres has shown us that the present system of telephone communication is far too tardy to be of any use. The infantry themselves naturally veto visual signalling. In enclosed country there is little doubt that the artillery, skilfully handled, could advance to quite close ranges, from which they could support their own infantry, and see when that support was really needed; but in anything like open country the advance of wheeled artillery with horse draught, in my humble opinion, would be impossible. Dependent on all this comes the employment of the Heavy Artillery, and until the system of employment of artillery generally is decided, no actual rôle can be allotted to the Heavy Artillery.

I now propose to offer my own suggestion for consideration. We must, of course, take our present organisation of the artillery of a field army as the basis of consideration, and we will suppose that an army of three divisions is moving to attack an enemy. The G.O. C.-in-C. commands the three divisions, and he has on his staff a colonel R.A., as staff officer for R.H. and R.F.A. (and presumably for Heavy Artillery, too). Each division has a brigadier R.A., who commands 3 brigades R.F.A., 2 batteries howitzers, 1 battery heavy. Now, the G.O. C.-in-C. probably decides on one division carrying out the main attack, we will therefore follow the 1st Division, which has been allotted the main attack.

It advances to the attack. The brigadier R.A., bearing in mind General Haking's lecture and what the infantry are ask-

ing him to do, ascertains from the G.O.C. 1st Division his plan of attack, which we will suppose is to make a holding attack with the 1st Infantry Brigade, while he pushes home the attack of the 2nd Infantry Brigade, keeping the 3rd in reserve.

We will suppose the 1st, 2nd, and 3rd Brigades R.F.A. belong to this division. The 1st Artillery is affiliated to the 1st Infantry Brigade, and so on. A reconnaissance of the position has taken place, and the brigadier R.A. is therefore in a position to say how he can best support the attack, and we will suppose that he decides that there is a position for one battery R.F.A. only in the advanced stages of the attack, from which the infantry's movements can be closely followed and seen. This battery he attaches to the 2nd Infantry Brigade to push along with it during the first and second stages of the infantry advance, by moving along under cover or by rushes from cover to cover, but on no account to come into action. The remaining two batteries of the 2nd Brigade R.F.A. and the heavy and two howitzer batteries he orders to find positions and come into action against the defenders' artillery as soon as he discloses it during the first and second stages of the infantry advance. These batteries will all be in concealed positions. The 1st Brigade R.F.A. will push in, following "such and such" an infantry brigade or battalion as may be ordered, according to where artillery positions are likely to be met with, and will come into action either in concealed or open positions as may be most imperative, and support the infantry in the third stage of the attack. At this stage the batteries already in action will be ordered to turn their fire on to such points as the batteries of the 2nd Brigade are firing at, and to control their fire with these batteries, it being evident that these batteries, which have pushed in close, can best see where artillery fire is most needed, it being an axiom that the original batteries in action shall choose such *indicated* targets as they may be able to enfilade, and, failing this, then that in their immediate front. The 3rd Brigade R.F.A. is held in reserve, still under the orders of the brigadier R.A., and available for meeting a counter-stroke or for reinforcing other guns already in action or for engaging the enemy's artillery fire, which may have again become troublesome. During this stage of the attack the battery of the 2nd Brigade R.F.A., with the 2nd Infantry Brigade, has come into action in an advanced position (if this advanced position necessitated high-angle fire, then a howitzer battery would have been detailed). It is obvious that this battery must be concealed or behind cover in order that it may exist; but the point is, that the B.C. of the battery has got to such an advanced position that he can see the whole of the main attack; he can see where artillery fire is most needed, and by turning his guns on to such points, either as a whole, by sections, or even by single guns, he can direct the whole of the rest of the artillery (in action) where their fire is needed, and they should conform to his control of fire, *i.e.*, when he "stops firing" at any particular point they should

follow suit, and when he resorts to "rapid fire" they should do so also.

By this means you can speak to your artillery in action through the mouths of the advanced battery's guns. When I speak of *advanced* battery, I mean that it should be about 1,200 yards from the enemy's lines, or, rather, that the B.C. should be. It will be an easy matter for this B.C. to be in touch with the brigadier 2nd Infantry Brigade. Whether it would be advisable to turn any of the guns on to support the holding attack is for the G.O.C. 1st Division to decide, and through his brigadier R.A. send the necessary instructions to which battery or batteries he may decide on. The battery that went off with the 2nd Brigade would be so far attached to it as to take its orders from the brigadier infantry. Similarly, the 1st Brigade R.F.A. would take its orders from this brigadier, unless given definite orders by the brigadier R.A., which would have been communicated to the G.O.C. 2nd Infantry Brigade. The question as to whether the batteries originally in action behind cover at a later stage should move forward will naturally rest with the G.O.C. 1st Division. The one thing to see to is that the battery selected to go forward and the brigade R.F.A. to move to closer range is communicated to all the artillery of the division; in fact, a rocket might be fired from the vicinity of the position finally taken up by the battery which is to control the fire, or if it is a brigade, then from that brigade's three battery positions. What is aimed at in this suggestion is some means of controlling and directing the fire of batteries which are too far off to clearly see the movements of their own infantry. It is obviously useless for the fire of a brigade of Q.F.'s to be pouring in on the defenders' line when their own infantry, having reached a position of temporary safety, are awaiting further developments before resuming their advance. It may be held that it will be quite impossible to tell what points the advanced battery is firing at, seeing that shells will be falling all over the battle area. I suggest that the advanced brigade R.F.A. will be able to see when the *more* advanced battery opens fire, and by ceasing their fire for a short time will readily locate the points being fired at; similarly, the batteries in rear can take their cue from this brigade. In any case, there is some system to work upon which may, and I think probably will, result in good achievements. Whatever system is employed, the Heavy Artillery will always be the first to come into action, and its objective will be the enemy's guns. It is often said that sufficient advantage is not taken of Heavy Artillery's long range, and the reason of this is not far to seek. The truth is that when the occasion arises, the divisional general is not near his Heavy Battery, and to bring them up means to lose the opportunity, and to tell them to "take the target on" from where they are, is to do only indifferently well what you can do with the Q.F. guns at your elbow. If as your advanced guard is pushing forward, driving in the enemy's advanced scouts and patrols, you come along with your Heavy Battery at the tail of the main

body, then you cannot make use of its long range to take on the enemy's guns which are hindering the advance of your advanced guard; whereas, if this battery were at the head of the main body you could make use of its long range to fire beyond the advanced guard at the enemy's guns that are delaying them, and often and often manage to find a position to enfilade them. Anyhow, it is quite sure that *in the attack* the Heavy Battery will engage the enemy's artillery, and will open the ball, but if it is not close up there will be delay. This applies in the advance to the attack, or when moving to meet an opposing army. In retreat you must have your heavy guns as far behind as is compatible with safety, *i.e.*, at the tail of the main body. The pursuit follows the same rules as the advance, with perhaps an extra inclination to push them forward, perhaps, into the advance guard. I therefore advocate that the Heavy Battery of a division on the line of march advancing to meet an enemy should be at the head of the main body in front of other artillery there, and of course covered by a small body of infantry. The mobility of Heavy Artillery has been brought into question on many occasions, and those who can remember the manoeuvres of 1903 will know why it came to be a by-word not to get blocked by the "cow" guns. The introduction of trained horses with riders instead of drivers has made this artillery as mobile as any artillery need be that has to be accompanied by infantry. The manoeuvres of 1906 and 1907, where the Heavy Artillery went up the Trundle and Bow Hill in the former and Quaintore Hill in the latter, prove how much this artillery has improved in mobility. Still there is a notion still abroad that it is likely to stop the way. In 1906 a certain infantry brigadier, finding his brigade slightly checked by a Heavy Battery going up Farnhurst Hill, thought he would get ahead of it by taking a slight detour to the left. The Heavy Battery was in camp at Frensham nearly an hour before the infantry arrived. Of course, going up a long, steep hill there may be slight checking on account of the necessity of allowing the horses to catch their wind; but this is only the case with exceptional hills like Farnhurst Hill, and ten minutes' check on such occasions should not go towards classing Heavy Artillery as immobile. During 1907, in the march from Newnam Mureen to Strathfieldsaye, the Heavy Battery was sent with the R.F.A. by a road which was two miles farther round than that taken by the infantry, and this road ran into the road by which the infantry travelled, about a mile outside Strathfieldsaye. The battery reached this juncture exactly at the same moment as the head of the infantry brigade, *but they had marched two miles farther*. I mention these incidents to dispel the notion that Heavy Artillery is not now sufficiently mobile to allow of its moving at the head of the main body. The question arises whether in open country wheeled artillery will be able to push sufficiently far forward to carry out the rôle ascribed to the battery of the 2nd Brigade R.F.A. mentioned in my example, and therefore the advisability of having at least one mountain battery per division suggests



itself. There is little doubt that in seeking cover under hedges and along small nullahs, and passing across country intersected with hedges, pack artillery has a great pull over wheeled artillery, and it would undoubtedly be able to creep up in open country to positions quite prohibited to wheeled artillery. That the rôle of Heavy Artillery and its employment in the field and its consequent position on the march is intimately mixed up with co-operation of artillery with infantry, must be my excuse for airing my views on what undoubtedly is a most important subject.

advance to the attack or when moving to cover as the main body. It is evident that pack artillery has a great pull over wheeled artillery, and it would undoubtedly be able to creep up in open country to positions quite prohibited to wheeled artillery. That the rôle of Heavy Artillery and its employment in the field and its consequent position on the march is intimately mixed up with co-operation of artillery with infantry, must be my excuse for airing my views on what undoubtedly is a most important subject.

The question follows the same rules as the advance, with perhaps an even inclination to push them forward, perhaps, but the advance guard. I therefore advance that the Heavy Artillery should be at the head of the main body in front of other artillery, and of course covered by a small body of infantry. The mobility of Heavy Artillery has been brought into question on many occasions, and those who can remember the manoeuvres of 1902 will know why it came to be a by-word not to get blocked by the "cow" guns. The introduction of trained horses with drivers instead of drivers has made this artillery as mobile as any artillery need be that has to be accompanied by infantry. The manoeuvres of 1902 and 1903, when the Heavy Artillery went up the Tumble and how Hill in the former and (Guns) Hill in the latter, prove how much this artillery has improved in mobility. Still there is a notion still abroad that it is likely to stop the way. In 1902 a certain infantry brigade, before its advance slightly checked by a Heavy Battery going on to the front. The Heavy Battery was in camp at the time, and nearly as soon as the infantry arrived, it came going up a long steep hill, and was able to reach the summit on account of allowing the horses to creep their way up, but this is only the case with exceptional hills like Guns Hill and ten minutes' work on such occasions should not go towards classing Heavy Artillery as immobile. During the march from Xosman Muzee to Standelshay, the Heavy Battery was seen with the R.F.A. by a road which was two miles farther round than that taken by the infantry, and this road ran into the road by which the infantry travelled, about a mile outside Standelshay. The battery watched the infantry exactly at the same moment as the head of the infantry brigade, but they had marched two miles farther. I mention these incidents to show the notion that Heavy Artillery is not now sufficiently mobile to allow of its moving at the head of the main body. The question arises whether in open country wheeled artillery will be able to push sufficiently far forward to carry out the rôle assigned to the battery of the road brigade R.F.A. mentioned in my example, and therefore the advisability of having at least one mountain battery per division suggests

## RASPLATA.

### ("THE RECKONING.")

By Commander VLADIMIR SEMENOFF, Imperial  
Russian Navy.

Translated, by permission of the Author, by L. A. B.

TWO years ago we were enabled, by the courtesy of Commander Semenoff, to publish in the JOURNAL his description of the Battle of Tsushima, at which he was present on board the *Suvaroff*, as one of Admiral Rojéstvensky's staff officers. In the earlier part of his career, Semenoff served most of his time in the Russian squadron in the Far East. Returning home in the autumn of the year 1901, he was appointed A.D.C. to Vice-Admiral Makaroff, at that time the Port-Admiral at Cronstadt; but when relations with Japan became critical towards the latter part of 1903, he applied to be sent out again to a ship in his old squadron, and in the middle of January, 1904, was appointed second-in-command of the fast protected cruiser *Boyarin*, forming one of the fleet under Admiral Alexeiff's orders. On the evening of the 29th, Semenoff left St. Petersburg by the Siberian Railway for Port Arthur, where he arrived late on the night of the 13th February. From 30th January, 1904, to 19th December, 1906, he kept a diary, in which he made daily—sometimes, on specially important days, even hourly—entries. This diary he has recently published as a book under the title of "Rasplata," or "The Reckoning." And he has again kindly given us the privilege of reproducing it in the JOURNAL, the translation having been made by a distinguished naval officer. To quote the author's own words: "Rasplata" in no way contains "Reminiscences," but is simply the diary of an eye-witness, presented in the form of a narrative. Its whole value lies in this fact. . . . Everything I tell of is based on the *data* of my diary. In every case, at the moment the event occurred I noted the time by watch; and the general feeling at the time was noted somewhat later. My diary also contains conversations and remarks which I wrote down whilst still fresh in my mind. Naturally, they stand in a very condensed form—mere headings sometimes.

"I will not, however, conceal the fact that occasionally, when under the influence of later accounts, I was tempted to omit this or that passage, not to reproduce the judgment on this or that event, *which I had formed on the spot and at the time*. I have resisted this temptation. I said to myself: "It was thus." At that time we had these ideas, this conception. Perhaps we were sometimes mistaken, but these mistakes arose owing to what we had gone through and what we had felt. Do I, after all, mean to write a history of the war? No, I desire in this work to present to the reader a picture of the experiences of one who took part in the war and who noted everything he observed at the time and place in his diary."

Commander Semenoff has divided "Rasplata" into two parts. In Part I. he deals with the events in Port Arthur from the date of his arrival until the *Diana*, in which he was serving, was interned by the French authorities at Saïgon, where she took refuge after the battle of the 10th August, 1904. In Part II. he relates the incidents of the voyage to the Far East of Rojéstvensky's fleet, from its departure from Libau to the battle of Tsushima, and his account of that battle is really the concluding portion of the present work.

It is only proposed to publish Part I. of "Rasplata," abridging it wherever it is possible to do so, without destroying the author's quaint but vivid style, as it throws an interesting and somewhat lurid light on the state of affairs obtaining at Port Arthur at the time of the outbreak of the war and its earlier phases, of which no account from the Russian side has as yet appeared. Later we may publish the more interesting incidents which occurred during the outward voyage of Rojéstvensky's fleet.<sup>1</sup>

In Chapter I. the author describes his journey from St. Petersburg to Port Arthur, where, as we have said, he arrived on the night of the 13th February. Lake Baikal, which was frozen over, had to be crossed in a troika (a sledge with three horses abreast), and it took about half a day to cover the 28 miles of frozen lake. On the evening of the 7th, the frontier station in Manchuria was reached, and here the news of the order for mobilisation reached him and his fellow-passengers. On the next day they learnt of the attack by the Japanese on the Russian fleet off Port Arthur and the disastrous results. On the 13th Dalny was reached, and here Semenoff learnt that his ship, the *Boyarin*, had been blown up by a mine. At 11 p.m. he arrived at Port Arthur, and after some difficulty obtained lodgings for the night. He proceeded next morning to report himself to the authorities, and here we take up, in Chapter II., his own account of events.

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<sup>1</sup> The complete translation of the whole book is in the press, and will shortly be published by Mr. John Murray.

## CHAPTER II.

IMPRESSIONS OF PORT ARTHUR—THANK GOD! A DESTROYER  
AT SEA THE FIRST TIME—"BE CAREFUL AND RISK  
NOTHING"—A BAD DISAPPOINTMENT.

The first place I naturally turned to was the Viceroy's<sup>1</sup> Naval Office. To begin with, I wanted to find out something of the fate of the *Boyarin*, which was of vital importance to me, and next to obtain some general information. Up to now I had not been able to make anything out of the rumours and gossip.

The Chief of the Staff, Rear-Admiral Vityeft, had formerly been my captain for three years. He received me like a brother, embracing and kissing me. Then, however, he hastened to tell me, just as if he wished to stop all questioning, that there were still hopes of saving the *Boyarin*. I was to report myself as soon as possible to the Admiral commanding the squadron; there I should receive all directions and orders. Meanwhile, he began to busy himself with all sorts of things. He turned over papers, placed sheets here and there, as much as to hint that he had no time for further conversation, being, in fact, tremendously busy.

Most of the officers of the Staff were old comrades of my time in the Pacific Squadron, some even were my "term" as cadets. On leaving Vityeft's room I tried to get at them. As soon as I entered a room, no matter how idle they might have been, they at once sat down at one of the tables, busied themselves with some papers, and only gave utterance to vague phrases. Not that they in any way made themselves important as members of the Staff. Nor did they forget old friendships. On the contrary, no sooner had I mentioned that I had been unable to obtain suitable lodgings, than I was deluged with the most friendly invitations. People who had only just pretended to be completely absorbed by the most urgent affairs, now became eager to send off orderlies to collect my luggage scattered over Port Arthur.

On board the *Petropavlovsk*, the flagship, the moral atmosphere was worse; it was depressed. I felt involuntarily "as if a corpse lay in the house."

The flag-lieutenants and other Staff officers joyfully shook hands with me. They made endless enquiries about their friends at Cronstadt and St. Petersburg, showed immense interest in my journey, but somehow always turned the conversation when I wanted to touch upon the present situation. The Chief of the Staff was even more busy than Vityeft had been. He took me straight in to the Admiral.

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<sup>1</sup> Admiral Alexeiff, who was also Naval and Military Commander-in-Chief.—Admiral Stark commanded the squadron under him.

Admiral Stark had changed little in the three years since I last saw him. He was still the old seaman; a little more grey than formerly, but his eyes, formerly so friendly and keen, now had something of weariness—a pre-occupied look. His amiable greeting and his orders gave the impression of being merely mechanical—the effect of habit. His thoughts were elsewhere. He hardly heard what I said. It seemed as if some invisible person were talking to him.

"Yes, yes," he said, "there is still hope. Yesterday we sent the captain and seventy men to look for the *Boyarín*. Perhaps—well, to morrow you might follow with the rest."

I asked permission to start off at once with some vessel, a torpedo boat or tug.

The Admiral was on the point of consenting.

"Yes, yes, of course—"

Then he suddenly seemed to remember something, and added in a weary tone:

"After all, no. It is all the same." With that he turned away and left the cabin without taking leave of me.

As soon as I was on shore again I went to the Viceroy's house—or, as it is called, "Palace." There I wrote my name in the visitors' book and went home—that is, to the comrade who had invited me. Strictly speaking, I ought to have reported myself to the Admiral second in command, but decided to put this off to the next day. "Was it not all the same?" My heart was heavy, and I felt the need of being alone.

My host had not yet returned from his work. I took off my uniform, sat down at the window, and looked about. Just in front of me rose up the massive "Golden Hill." It was crowned by the ramparts of our batteries, and over these flew the proud flag of Russia. "Where the Russian flag is once hoisted it will never be struck," Nicholas I. said when the occupation of the lands of the Ussuri was reported to him. Until yesterday, yes, until this morning, I had believed this. And now, now I dared not answer myself. Or still worse—a voice within me gave an answer, which I simply would not believe. To the left, in the east corner of the basin, lay the *Novik* in dry dock. Behind the grey roofs of the workshops and sheds rose a whole forest of slender masts, which belonged to the destroyers, tied up there alongside one another. Through the light haze illumined by the sun appeared the high sides of the *Petropavlovsk* and *Sebastopol*. Further to the right, in the passage to the outer roads, over the roofs of the torpedo workshops, the masts and funnels of the *Retvisan*, which had grounded there, were visible. Still more to the right, behind the batteries, buildings, and the slip on the Tiger's Tail Peninsula, stood out the silhouettes of the remaining ships of the squadron. They lay there, closely packed together in the small portion of the western basin, where the dredging had just been completed.

In the evening I went to the Casino. Hardly an officer, either of the Navy or the Army, was to be seen there, only now



and then a member of the Staff or of the port authorities. Officials and civilians predominated. The air was full of rumours and tales, each one more improbable than the other. Only one thing was unanimously agreed to. Had the Japanese sent, not four, but forty destroyers to the attack, and at the same time disembarked a division of troops, the town and the rest of the squadron would have fallen into their hands.

The conversations on this subject affected us all very deeply, but, strange to say, they were carried on in a sort of "academic" tone, as if things which, though important, had no meaning at the moment they were being discussed.

The chief question was: How will the Viceroy get himself out of this difficulty? That he would succeed in doing so no one doubted—quite without irony. But how? By some cunning dodges, or at the cost of someone else—a scapegoat?

"No one can excuse Stark," said an old, hoarse port official, who had evidently drunk too much. "He is certainly a worthy man, but inexcusable. It is a thousand pities. And even now he is doing nothing."

"There you are mistaken," interjected a civilian official at the next table. "It is not so simple a matter as you suppose. Stark has in his pocket a document which makes it certain that he will be completely exonerated. And not only that: it will bring him thanks and reward. We of the Staff know that quite well."

"Be quiet," interrupted his neighbour, with a sharp voice. "Stark has the document, not you. This business will run its course all right. No one cares a rap for you."

The civilian official said not another word.

The next morning, 15th February, I was already on board the *Petropavlovsk* before the hoisting of the colours. Sad news awaited me. The *Boyarín* had foundered, so I had to look out for another appointment. This was not easy for an officer of my standing, but old friends in the squadron helped me. By chance a billet was found. The captain of the destroyer *Reshitelny*, Lieutenant K—, was seriously ill, and had asked to be relieved. The correspondence which was necessary to put me into his place would usually have taken up three days. Now the business was settled in a few hours. The Admiral had first to receive a report from his Staff. Then the Viceroy's Naval Staff had to be asked if anything stood in the way of my nomination. The Staff had to submit the matter to His Excellency, and then send a reply. If in the affirmative, this was reported to the Admiral, who could then make out my appointment, subject to the subsequent written approval of the Viceroy.

All was arranged smoothly. I was my own orderly, and carried the papers from one office to the other.

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On 8th February.

"My friend, you now have your appointment in your pocket," said my old shipmate, on whom I had quartered myself. "This evening it will appear in the squadron orders, and as to the Viceroy's confirmation, you need not bother. He does not concern himself with such trivialities. These he leaves to Vityeft, and he replied that nothing stood in your way. We shall submit to "H.E." the appointment already made out, and he will initial it with his green pencil, and that's all."

"A thousand thanks, dear friend. I will stand champagne at dinner to-day. And now I must go and call on K—. Perhaps he has some public money to hand over to me."

"Shall I invite anyone to dinner?" he called after me.

"Yes, of course."

I found K— in one of the spare rooms of the Casino. He was in bed with high fever.<sup>1</sup> However, he remembered clearly that he had no money on charge.

"We have only just commissioned; that is why there is no money. Provisions and stores must be on board. You'll find everything in the account books—" He evidently tried to collect his fevered thoughts, but his wife, who was nursing him, gave me such an eloquent look that I quickly ended our Service talk, wished him speedy recovery, and left.

At home things looked glorious. My host had prepared a gala dinner.

"The *Reshitelny* is in sight. Make room for the *Reshitelny*."

"Gentlemen, let us sit down," said my friend. "We won't waste time on compliments, like a pack of young ladies when fresh caviar and vodka are on the table," and so the meal began.

"I must tell you frankly," joked one of the guests, "that your destroyer is not worth much. She belongs to one of our unfortunate Russian imitations of the *Sokol* type. All the same, one likes what is one's own."

During the noise of the general conversation I told my host the result of my visit to K—.

"Well, thank God! the money is the principal concern. Who is going to bother himself with such trifles as stores? And why? To let it fall into the hands of the Japanese?" The wine seemed to loosen his tongue. He suddenly bent over towards me and rapidly whispered in my ear: "Take over the vessel as soon as possible. That is the main thing. Do it tomorrow. Report that you have found her in proper condition, and that you have assumed command. The matter has been rushed through. Turn it to account. When once an appointment is made it is more difficult to cancel it. Eh? You understand?"

The preceding nights had brought me little sleep. I was therefore sleeping like a corpse, when I suddenly became aware

<sup>1</sup> He died at Harbin on the way home.

of someone tugging at my shoulder, crying: "Your Honour! Your Honour!"

"What's up?"

"The Admiral's office is calling up on the telephone. They seem in a great hurry."

Through the window the day was breaking. It was evidently still very early.

"They are in a hurry—a great hurry," repeated the orderly.

"Hullo! I hear. Who's there?"

"Your appointment came out last night."

"I know—I know."

"Can you take over command at once? Your destroyer is to go out at seven. She is now getting up steam." (I looked at my watch; it was 6.35) "You are to be at the disposal of the Second-in-Command. He has hoisted his flag on board the *Amur*.<sup>1</sup> You will get your orders from him. What shall I report to the Chief of the Staff? Can you do it?"

I was called upon to go on board a destroyer that I did not yet know—the devil knew what kind of a one!—and be off at once. What nonsense!! Then I suddenly remembered the conversation of the evening before: "Take over the vessel at once. The matter has been rushed through. Turn it to account." Instead of refusing energetically, I shouted into the telephone:

"Of course I can. Report to the Admiral that I'm off this minute. Please let the duty steamboat fetch me at the landing-place."

My host had got up also at the ringing of the telephone. With his assistance I threw everything that I needed into the first portmanteau I found, and in a few minutes I was at the landing-place. The servant followed with my gear. Five minutes later I was on board the *Reshitelny*.

The torpedo lieutenant, two sub-lieutenants, and the chief engineer received me. There was no time for ceremonies. I mentioned my name and went straight to the bridge without going below.

It was seven o'clock. At the signal station on Golden Hill the signal was already flying: "*Reshitelny* proceed out of harbour."

"Thank God!" I thought, and ordered: "Cast off bow hawsers!"

The destroyer was a handy little vessel. Although I did not know her at all, I safely wound my way through the crowd of shipping in the East Basin. Then I ran through the entrance, passed the *Retvisan*, which was surrounded by a lot of vessels rendering assistance, and proceeded with the destroyer *Steregushitchi*, which followed in my wake, to the outer roads. The *Amur*, with a Rear-Admiral's flag, *Gilyak*, and *Gaidamak* were awaiting us.

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<sup>1</sup> Mine-layer.

The only order I received from the *Amur* was the signal: "Take station four points on the starboard quarter." And so we shaped our course for Talienwan.

The weather was suspicious and dull. Snowflakes were floating in the air. I sent for the lieutenant, and asked him if there were any deviation tables. He did not know, as he had only come on board yesterday. I then asked the senior sub-lieutenant. He had been on board quite a long time—that is, two whole weeks. He reported that since the last commission no one had touched the compasses. The magnets were in the same places as last year.

"Then our compasses will show us a nice sort of course," I said, jokingly. Inwardly I did not feel at all in a mood to joke. The falling snow might get so thick as to hide the coast from view, and then I was tied to the *Amur* like a blind man to his guide, if I did not know the deviation of the compasses.

Towards ten o'clock we were near the San-chan-tau Islands. These lie at the entrance to Talienwan Bay.

*Amur* signalled: "Destroyers to search Kerr and Deep Bays." She herself and the other two vessels reduced speed. We had to increase ours. I was the senior; *Steregushtchi* followed me.

This, my first cruise, has remained fixed in my memory. In such moments a man understands and takes in everything, even insignificant incidents; he arrives instinctively at decisions, and on thinking them over again later, finds that they fulfilled logically the requirements of the moment.

Kerr and Deep Bays were well known to me from former times. I required neither compass nor chart. I only needed to look at the characteristic capes and rocks. Here the enemy might be hiding. I had orders to search the bays. What was I to do if I sighted the enemy? Nothing had been forbidden—therefore I must attack.

"Full speed ahead! Clear for action!" I shouted from the bridge.

The men hurried to their stations.

We were going 16 knots. Astern the *Steregushtchi* was going so fast that spray and foam were sent high up on her bows.

The dark mass, lightly covered with snow, of the rocky promontory which hid the bay from our view, came nearer and nearer. If there was anyone behind it we would come as a complete surprise. Perhaps someone was also on the lookout on the other side. How our hearts beat in suspense!

No one there.

Both destroyers steamed through the bay on a curve, went out into the open sea, and searched the next bay in the same way.

Again no one. All our keenness was thrown away.

As soon as I had reported by signal that both bays were clear of the enemy, *Amur* ordered *Gilyak* and *Gaidamak* to stop

engines and wait for her, while she went in herself to lay mines. We, the destroyers, were to follow her, slightly on the quarters. We were to fire on and sink any mines which might have been badly placed, and have come to the surface, thus revealing to the enemy the whereabouts of the line of mines. This convoying the mine-layer was very dull work.

When we returned to the place where the two vessels were to wait for us we did not find them. We steamed backwards and forwards looking for them, but were obliged eventually, as night came on apace, to go into Dalny without them. At Dalny we found the *Vsadnik*. Next morning, on enquiring by telephone, we heard that our two consorts, not being able to find us in the snowstorm, had returned to Port Arthur. Whether they did so on their own initiative or by superior order I do not know. I confess that this simple solution of their task did not specially please me. After the sinking of the *Yenissei* we only possessed one mine-layer, the *Amur*. She had to be preserved. That was why she had been given the two above-mentioned gunboats and the two destroyers as a protection. And now she had only the two latter with her. Moreover, the *Gilyak's* 4.7-inch guns were our principal strength.

The *Amur* went into the inner harbour. The destroyers had to watch the northern and southern entrances.

It was horrible lying there at anchor. The tide was running either towards the entrance or out of it, keeping the vessel permanently broadside on to the heavy sea running from the southward. I had learnt during my long experience how to wedge myself into a bunk, but now we were rolling so heavily that one could no longer sleep. Perhaps we were thus more useful as guardships, but we suffered greatly.

The sad experience of the *Boyarín* was, as it seemed, not in vain. Orders were given to lay out the mines in Taliénwan Bay strictly according to plan.<sup>1</sup> The next morning the harbour boats began the preparatory work of placing beacons. These were carefully charted and the mines were laid between them.

On 18th February an incident occurred, trivial in itself, but which irritated me greatly.

I had gone alongside the *Amur* to coal. When nearly finished, the Admiral sent for me.

"Can you start at once?"

"Yes, sir."

"The boats are coming back for some reason or other. They have orders to return if they see anything suspicious. Go and see what is the matter. If there is nothing, let them continue their work."

"Aye, aye, sir."

A few seconds later my vessel was steaming out of the harbour towards the boats which were slowly returning.

When alongside of them we stopped.

<sup>1</sup> The *Boyarín* had struck one of the Russian mines.



"What's up?"

"A Japanese torpedo boat appears to be in sight to seaward."

"How many?"

"One."

"A large one?"

"We could not make out; she is too far off."

It was evident that they had either been mistaken or sighted something else. The weather was clear, without fog or snow. What should a single hostile torpedo boat be doing here in these circumstances in broad daylight? If, however, one had gone astray by accident—so much the worse for her. I did not hesitate for a moment.

"Return to your work. I'll drive off the enemy."

The clumsy steamboats, with the row boats in tow, turned slowly. Meanwhile the *Reshitelny* hurried towards the passage between the San-chan-tau Islands, against the spray of a very high but short sea.

Again "Clear for action!" Once more officers and men hurried to their stations in cheerful excitement.

We reached the open sea. The horizon was perfectly clear. We could see 10 miles, and there was nothing in sight but a Chinese junk. Her square sail, which was fore-shortened, might at a distance have been taken for a funnel.

The old seaman at the helm could not suppress a confidential remark: "Your Honour has no luck," he said; "this is the second time."

The engine-room telegraphs rang out. We ran up to one point, then another, but no sign of anything.

"They dare not face the daylight. We have been kicking about three days and have met no one," some voices amongst the crew were heard to say.

"We've got no luck at all," complained the sub-lieutenant.

We re-entered the harbour of Dalny to report to the Admiral. On the way we were met by the *Vsadnik*.

"Remain under weigh near the entrance and protect the boats," she signalled.

We turned, and rolled about in the swell all day.

When I got back to my billet in the evening I went on board the *Amur* to make my report. The Admiral received me very curtly. After he had heard my report he said:

"You only had orders to enquire, look round, and report, and not to embark upon adventures."

"But, Your Excellency, on the information which reached me, I considered myself justified in taking action."

"You had no right to risk your destroyer. You are bound not to endanger the safety of the vessel entrusted to your care."

"What!" I thought; "not to risk anything? Warfare surely means permanent risk to men and ships. Every torpedo boat attack is a desperate venture, even in the most favourable

conditions, if looked upon from the point of view of praiseworthy caution. Not to endanger one's vessel? Why, we do that even in time of peace, so as to be ready for war. If we are to guard our vessels from a meeting with the enemy we had better hide them in some inaccessible harbour. But then, in the devil's name, what is the fleet there for?"

"Risk nothing!"—that was the maxim to which they clung, Alexeiff at sea, Kuropatkin on land.

How often in the course of the war have I had to think of this maxim with bitter anger? Later on we were forced to risk something. Meanwhile we had had a whole string of failures, had indeed thrown away a great part of our fighting strength, and had allowed the first enthusiasm of our men to evaporate. Mukden and Tsushima are the consequences of this maxim.

Then, of course, I could not guess how the war would end; but it must be owned quite honestly. In my diary it is clearly indicated that inwardly I grumbled quite as much as so many around me did aloud, although I had, outwardly, to "bring them up" as in duty bound.

When I returned on board I, of course, did not mention a word of my conversation with the Admiral. Zeal, love of fighting, spirit of enterprise, I considered the foundation of success, especially in a destroyer. These happened to be present in my officers and men in a specially high degree. According to my view, it would have been criminal to kill these qualities by telling the men that we were to "risk nothing" (that is, that there was to be no hostile meeting), and that we were not allowed to "expose the vessel confided to us to any danger" (that is, to the enemy's projectiles).

On 20th February our labours were at an end, and we returned to Port Arthur. The whole time we had seen no Japanese, but we had suffered a good deal under the constant changes of weather. On some days the thermometer stood at 37° and 38° F., in spite of the wind; on others it went down, in calm weather, to 20°. Then the harbour was covered in a few hours with a crust of ice, which, however, remained so thin as to form no obstacle or danger even to a destroyer.

In those days our mines developed a very unpleasant quality. They had been tested in protected ports, such as Transund in the Baltic and Tendra Bay in the Black Sea. There they thoroughly answered all requirements. But here they lay in bays subject to both the rollers of the open sea and tidal streams. A small error in construction made them here dangerous alike to friend and foe. The steel wire mooring rope, which joins the mine to its anchor, and is intended to secure the mine in place, is rove through a small hole in one part of the anchor. These holes are made by machinery in all the anchors, and no one remembered that they had sharp edges. In a seaway, however, and in alternating currents, the mine moved, and with it the mooring rope. The latter

became gradually worn through, and the loaded mine, fitted to explode at the slightest touch, drifted about at sea.

Once such a mine drifted up in front of the hut of a Chinese fisherman built on the edge of the water. The mine bumped on the rocks of the coast, and nothing remained of the hut and all it contained. Another floated in a calm up on to a flat beach and was left high and dry by the receding tide. A military patrol discovered it and decided to remove it. When the men began to drag it away, the mine naturally exploded, and of the twelve men of the patrol only one escaped by a miracle, and was able to report the circumstance. Of course, we were constantly exposed, as were the Japanese, to the danger of hitting one of these mines drifting about at sea.

As we left Talienwan we saw two of them, and had to destroy them.

At Port Arthur a heavy blow awaited me.

I had just secured abreast of the coal-shed and begun coaling, when an officer arrived alongside in the duty steamboat and informed me that, by order of the Viceroy, he had been appointed to the command of the *Reshitelny*. At the same time I had been appointed second-in-command of the *Angara*.

"The destroyer is, I suppose, to have some rest now?" asked the new captain, without leaving his boat.

"What? Rest? She is to fill up with coal, then go to the dockyard to make good some defects developed during the night (they are in the engine-room), and to have steam up by 8 a.m. to-morrow to go out into the roads—kindly take over the command."

The "novice" at once altered his tone. He came up on deck and began to shake me warmly by the hand.

"You don't say so. I never expected *that*. I'm in no way prepared. Pray do me the kindness to take the vessel to the dockyard after coaling. This is the first time I have been on board of her, and I can't be expected to take her through this mass of shipping at dusk, or even at night."

I was so stunned by this naïve remark that I answered mechanically:

"Very well. Be off; I'll do it."

The steamboat departed in haste.

When I had secured the *Reshitelny* alongside the other destroyers at the slip, and was preparing to leave her, it was already pretty dark. I had not much to pack—a handbag—all my other gear had remained in the house of my friend, whom I had to leave so hurriedly. As it was so late I intended sleeping again at his lodgings and starting on my new duties in the morning.

In the cabin the officers were assembled to say good-bye, as is customary. They clinked their glasses with mine and emptied them, but their good wishes were somewhat vague. It seemed that in the short space of only five days we had become

good friends. The parting was not easy; I had to end it quickly.

"Gentlemen," I said, "I have only been your captain a very short time, but I thank you for your services. Everything was excellent. One must not quarrel with one's fate. I shall now rust away on board a transport. But for you I wish that on the first coloured chocolate box pictures that are made during the war, the photograph of the *Reshitelny* may appear."

"Many thanks. We will do our part. But what do you say? You are ordered to a transport?"

I hurried on deck. By contrast with the bright light in the mess it seemed doubly dark. (As it was war time, we were not allowed to show any lights on deck.) Only the messenger showed the way to the gangway with a shaded lantern.

"And the men?" asked the lieutenant, who had seized my hand just as I was about to step into the boat.

When I turned round I had already got accustomed to the darkness, and saw that rows of men were standing along the ship's side.

"Why this parade? Surely this is not necessary. It is night, the men must sleep."

"I have not ordered it. They have come of their own accord to say good-bye."

I took a few steps along the front.

"Thanks for your services, my brave lads. God grant that you and your destroyer may soon meet the enemy and give you glory in the fight. Good-bye."

"Respectful thanks,"<sup>1</sup> sounded back from the ranks, somewhat confusedly, but so heartily—I was glad it was dark.

The customary embrace of the boatsmain's mate, a last grip of the hand with the officers, a few strokes of the oars, and everything seemed far, far behind me.

"What has happened? Why have I been superseded?" I shouted to my friend of the Staff. "Surely you told me that all was in order?"

"Yes, but——"

"No; you listen first. I have given up my good billet at home for the sake of the war. If I had wanted to join a transport, one starting from Cronstadt would have done as well. The transports at Cronstadt are just as fine as those at Port Arthur. I have not come out here for that sort of thing. In time of peace I have always served in fighting ships, and now in time of war I am to join a transport. What is the meaning of it? Couldn't a worse man be found for the *Angara*? Such a post is hardly a coveted one, I should think."

"Peace! Curse as you like, it remains as it is. Everything was in order, as I told you. When the draft appointment

<sup>1</sup> When superiors address their men they are taught to answer thus in unison.

was submitted, it was, as usual, a mere formality. Then he suddenly struck out your name with his green pencil. 'The other is senior,' he said. Vityeft tried to stand up for you, and asked where you were to go. You had been sent out as a second-in-command. 'To the *Angara*,' was the reply. He at once wrote it in himself. He forgets nothing."

That night I did not sleep well, hardly at all.

My want of seniority was evidently a mere pretext. Amongst the destroyer captains were many who were considerably my juniors. But what was the real cause? Did "he" now, in his present position and in time of war, bethink himself of an old story? Years ago a certain lieutenant had declined to blow "his" trumpet. That young officer had told "his" A.D.C. that his pen was as little for sale as his sword. If he were even base enough not to forget such like personal affairs in times of peace, now we had war, and in the face of this all else must give way. Honour, duty, conscience demanded this.

"It can't be," I thought, and threw myself about in my bed. "We are now at war—a real war, not merely Chinese riots. In war one lets volunteers fight in the front rank."

I involuntarily thought with bitter wrath of an anecdote which is told of one of our best known Admirals. He was once second-in-command to a very autocratic captain. On the latter saying: "While you are serving me, you must do this differently," he replied: "I am not serving you, but *with* you I serve His Majesty the Tsar. You are not rich enough to keep me in your service."

In Port Arthur at the time of the Viceroyalty such views would have been considered rank heresy.

When the day broke I was already up, and no sooner were the Viceroy's offices open than I was there.

Admiral Vityeft received me at once, but seemed still more busy than at my first interview.

"It is not right of you to be so excited about the *Angara*," he tried to calm me. "She is by no means a transport, but already attached to the cruiser division. Perhaps she will be told off to most important duties. The vessel has only just been taken over from the Volunteer Fleet and has a somewhat mixed crew. We count on you to put things right there. Very responsible and difficult duties await her executive officer."

"If the service is so honourable, you will easily find candidates who are older and worthier than I. I don't aspire to this at all. I was appointed second-in-command of the *Boyarin*. She has gone down, and it would be absurd for me to demand to be appointed to another ship in a like capacity; I don't think of it. But I merely ask to be sent to a fighting ship. That is what I have come for. You know me. I am an old navigator and know every spot hereabouts. Can't I become navigating officer, or even watchkeeper? I shall be content with anything."



The Admiral had never been a good diplomatist, and now ceased acting. He leaned over the table and raised his arms in a helpless attitude.

"What can I do? Just consider: he wrote it *with his own hand*, and with the *green pencil*."

What I thought when I left the office I would rather not say.

At the door I was stopped by one of my old friends.

"Makaroff is appointed to the command of the Pacific Fleet," he whispered in my ear.

"What! And what about you people?"

"We depart—are you satisfied? Now you won't remain long in the *Angara*. But say nothing of this. It is still a secret."

I squeezed his hand in my joy, and began my new duties with a lightened heart.

(To be continued.)

## NAVAL NOTES.

The following are the principal appointments which have been made:—Rear-Admiral—A. G. Tate to be Admiral Superintendent of Portsmouth Dockyard. Captains—J. D. Dick to "Hyacinth"; T. D. Sheppard, M.V.O., to "Donegal"; the Hon. G. A. Hardinge to "Sutlej"; S. A. Hickley to "Doris"; the Hon. V. A. Stanley, M.V.O., to "Essex"; R. P. Purefoy, M.V.O., to be Assistant to Admiral Commanding Coastguard and Reserves; R. E. Wemyss, M.V.O., to "Albion"; C. F. Lambert to "Argyll"; H. T. Hibbert to "Berwick"; A. G. H. Moore, M.V.O., to be Chief of Staff to Admiral Sir W. May, K.C.B., K.C.V.O., Commander-in-Chief of Home Fleet; H. L. Tottenham to "Implacable"; O. De B. Brock to "King Edward VII."; W. Lumsden to be Director of Royal Indian Marine; R. F. Scott, C.V.O., to be Naval Assistant to Second Sea Lord; H. M. Doughty to "Sutlej"; C. W. Keighley-Peach to "Euryalus"; G. P. Hope to "Magnificent"; C. F. Thorp to "Terpsichore"; B. J. Yelverton to "Bulwark"; C. G. Chapman, M.V.O., to "Devonshire"; J. de M. Hutchison, C.M.G., to "Exmouth" as Captain and Chief of Staff to Admiral the Hon. Sir A. G. Curzon-Howe, K.C.B., C.V.O., C.M.G., Commander-in-Chief, Mediterranean; T. L. Barnardiston to "Mars"; the Hon. R. F. Boyle, M.V.O., to "Antrim"; F. G. Eyre to "Canopus"; E. R. Pears to "Glory"; W. C. Packenham, C.B., M.V.O., to "Triumph"; the Hon. H. E. Holmes A'Court to "Leander."

Admiral the Right Hon. Lord Charles Beresford, G.C.V.O., K.C.B., struck his flag on board the *King Edward VII.* on the evening of 24th ult., at Portsmouth, on relinquishing the Command of the Channel Fleet. The *King Edward VII.* paid off at Portsmouth on the 26th ult., and recommissioned the following day as flagship of Vice-Admiral Sir Berkeley Milne, Bart., K.C.V.O., in command of Second Division of Home Fleet; she left Portsmouth on the 31st ult. for Portland, and Sir Berkeley Milne transferred his flag to her from the *Hibernia*, which ship is to become the flagship of Rear-Admiral J. Startin, the Second-in-Command of the Division.

Admiral Sir W. H. May, K.C.B., K.C.V.O., hoisted his flag on board the *Dreadnought* at Portsmouth, on the 24th ult., on assuming command of the Home Fleet, in succession to Vice-Admiral Sir F. C. B. Bridgeman, K.C.V.O., whose flag was struck the previous evening; Sir F. Bridgeman has assumed his duties at the Admiralty as Second Sea Lord, where he replaces Admiral Sir W. May.

The first-class armoured cruiser *Aboukir* arrived at Plymouth on the 3rd ult. from the Mediterranean; she paid off on the 8th ult. at Devonport, recommissioning for a further term of service in the Mediterranean on the following day, and left again on the 11th ult. for her station.

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The first-class armoured cruiser *Donegal* paid off on the 8th ult. at Devonport from the Home Fleet, and recommissioned the following day for service in the Fourth Cruiser Squadron, where she relieves the *Sutlej*.

The surveying-ship *Fantome* paid off on the 5th ult. at Sydney, New South Wales, and recommissioned the following day for a further term of surveying service.

*Statement Explanatory of the Navy Estimates, 1909-1910.*—The Estimates for 1909-10 amount to £35,142,700, as compared with £32,319,500 for the current year.

The principal increases occur under the heads of Pay of Personnel (Vote I.), Victualling (Vote II.), Ordnance (Vote IX.), Works (Vote X.), and the three sections of the Shipbuilding Vote VIII.

The total number of the personnel remains at the same figure as that at which it has stood for the past two years. The increase of £150,000 for pay is partly due to a correction of what has proved to be an underestimate in the past; the last two completed years (1906-7 and 1907-8) have resulted in deficits of £254,000 and £155,000 respectively.

A provision of some £75,000 has also to be made to meet the further development of various schemes approved in previous years, which have carried with them improvements in the pay and allowances of the fleet.

The rise in the Vote for victualling and clothing is due, in the main, to the fact that, as was explained in last year's Estimates statement, stocks of victualling stores purchased in previous years have been drawn upon without replacement during the last three financial years. The amount by which the Vote was relieved in the current financial year was £100,000. There are no more surplus victualling stores left to draw upon, and £100,000 extra is therefore required to provide the corresponding supplies by cash purchases next year.

The £30,400 balance of the increase is due to a rise in the price of fresh food, principally meat.

In Vote IX. for armaments, *i.e.*, guns, ammunition, etc., again part of the increase is caused by the necessity for cash purchases of stocks of stores, of which for some years there has been a surplus to use up. Last year this Vote was relieved in this respect by the utilisation of certain stocks without replacement to the extent of £200,000. There will still be a remaining surplus of stocks to the value of £105,000 next year, so that nearly £100,000 out of the total increase of £332,300 is required under this head. The balance of the increase is due in the main to the enhanced cost of the guns and ammunition for the new ships about to be built.

The heavy charge under Vote X. is due, in the first place, to the beginning of large instalments of the cost of the new lock at Portsmouth Dockyard, and of the Rosyth contract which has just been let. The other big items under this Vote are the completion of the large works at home and abroad which have been constructed under the Naval Works Loan Acts, and the payment for which now falls on the Estimates. £641,700 has to be provided for this purpose, an increase of over £251,000 on last year's figure.

The increases shown under the Annuity subhead of Vote X. and under Votes XII., XIII., and XIV., are automatic and uncontrollable,

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the pension Votes and the annuity alone accounting for a rise of over £140,000. The extra charge of £29,600 for Vote XI. is due to a great number of small requirements, none of which in themselves involve a serious expense.

*Shipbuilding and Repairs.*

New construction for the year will cost £8,885,194, as against £7,545,202 for 1908-09. £6,599,424 will be spent on a continuation of work on ships already under construction, and £2,285,770 for beginning work on ships of the new programme, for which financial provision is made in the Estimates as follows :—

- 4 Battleships (*Dreadnought* type),
- 6 Protected Cruisers,
- 20 Destroyers,

and a number of submarine boats, for which a sum of half-a-million pounds is allowed.

In addition to the above provision for ship construction, His Majesty's Government may, in the course of the financial year 1909-10, find it necessary to make preparation for the rapid construction of four more large armoured ships, beginning on the 1st April of the following financial year. They therefore ask Parliament to entrust them with powers to do this effectively; such powers would enable them to arrange in the financial year 1909-10 for the ordering, collection, and supply of guns, gun-mountings, armour, machinery, and materials for shipbuilding, thus making possible the laying down on the 1st April, 1910, of four more ships, to be completed by March, 1912.

The estimated time for the completion of a battleship is now taken as two years; but this period does not cover the whole time during which work is being done in obtaining necessary materials and in the manufacture of certain parts of the ship's equipment, such as gun-mountings. Three months' notice in advance ought to be given to contractors to ensure completion within two years from the date of the order of the hull, and if an exceptionally heavy demand were to be made on the contractors, much longer notice would be required. The actual date of "laying down" can indeed be postponed for some time without delaying the final completion of the ship, provided that work is proceeding in the manufacture of guns, gun-mountings, machinery and armour, and that the materials for the hull are all collected at the yard ready for immediate building. It is on an estimate of time in which allowance is made for these facts that the period of construction of a battleship is reckoned at two years.

For some years past it has been the practice for ships of the new programme to be laid down very late in the financial year. An obvious effect of this system is to postpone for some two years a large part of the financial burdens of the programme to which the ships belong. In the programme of the new financial year, two battleships are to be laid down in July, which is the earliest date on which we can lay them down, having regard to the necessary notices to contractors for the supply of certain parts of the ship. Two more battleships are to be laid down in November, and in respect of these four ships a sum of £1,531,600 is taken in the Estimates.

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There will thus be heavy payments required for four new battleships during the first financial year of their construction, the excess on this item over the corresponding charge of last year being £1,274,215.

£150,000 of the increase under section II. of Vote VIII. is caused (as in Votes II. and IX.) by the necessity for cash provision of stores, which have in previous years been taken out of stocks without replacement.

The great fall in the price of coal, and the state of the shipbuilding trade, has enabled the Admiralty to place orders for the annual requirements of coal for the fleet and for the new ships of the current year's programme on most advantageous terms.

Between the 1st April, 1908, and the 31st March, 1909, the following ships will have been completed and become available for service:—

3 Battleships (*Lord Nelson* (delayed from previous year), *Agamemnon*, and *Bellerophon*).

4 Armoured Cruisers (*Indomitable*, *Inflexible*, *Invincible*, and *Defence*).

5 Destroyers—Tribal class (three delayed from last year).

17 First-class Torpedo Boats (coastal destroyer type).

7 Submarines.

On the 1st April, 1909, there will be under construction:—

6 Battleships.

1 Armoured Cruiser (*Invincible* type).

2 Unarmoured Cruisers.

5 Second-class Protected Cruisers.

25 Torpedo Boat Destroyers.

6 First-class Torpedo Boats (coastal destroyer type).

19 Submarines.

I am glad to be able to say that cooling machinery for the cordite magazines on board H.M. ships has now been provided for all completed battleships and cruisers which are likely to be retained on the active list, and for all ships under construction except destroyers and smaller craft.

The long continuance of the labour disputes in the private shipbuilding yards has seriously delayed the progress of most of the ships that were under construction during the year.

The Board are giving careful attention to the possibility of constructing floating docks for the repair of men-of-war of various sizes. The idea, of course, is no new one, but the serious want of dock accommodation for our biggest ships on the east coast, and the long time that the construction of permanent works on shore is bound to take, justify an exhaustive investigation of the question, whether the provision of floating docks at certain of our ports would not be an advisable step. Floating docks possess the great advantage of mobility, and for torpedo craft they could probably be used with safety at several ports where they are much needed. There are, however, unquestionably great difficulties in the use of floating docks for the repair of big ships. On the English coasts the large rise and fall of tide makes the safe moorings of floating docks in close proximity to a dockyard or a shipbuilding centre a very serious problem, and the depth of water needed is so great that a considerable amount of dredging would be necessary in many localities.



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The question of the use of dirigible airships for naval purposes has been under consideration, and it has been decided to carry out experiments and construct an aerial vessel.

**Personnel.**

A full report has recently been presented to the Admiralty from the flag officers who have been in charge of the vessels manned by nucleus crews on the system, which has now been at work for some four years. The reports received are of a most favourable character, and all the flag officers concerned agree that the nucleus crew system ensures a readiness for war and a general efficiency which has never before been obtained—at least since the introduction of steam machinery into the Navy. It must be remembered that before the introduction of the nucleus crew system such ships as were not fully manned were entirely without officers or crew, and left laid up in the dockyards, which they never left until their turn came for full commission. Now, on the other hand, the ships are taken to sea for cruising and gunnery practice, and are thus kept in a state of working efficiency that could not otherwise be contemplated. The chief advantage, however, obtained under the system of nucleus crews is the greatly increased proficiency in gunnery due to the more permanent association of the principal officers and men with the ship and her armament. The recent battle practice returns are a most satisfactory evidence of this.

While practically all ranks and ratings in the fleet have received increases of pay from time to time during recent years, officers of the rank of commander have been still paid the same rate as they were in 1864. It has accordingly been decided to increase the full pay of commanders from 20s. to 22s. a day. It has afforded the Board of Admiralty very great satisfaction to have been able thus to show their appreciation of the value of a class of officers on whose loyal and praiseworthy exertions so much of the efficiency of the fleet depends.

During the past year it was decided to introduce, experimentally, in the General Depôts at the Home Ports a system of payment in advance to men going on long leave of a proportion of the pay which would become due to them while absent, as had previously been done in the case of Marines serving at headquarters. The experiment has proved thoroughly successful, the concession being very satisfactory to the men without involving expense to the Crown, and it is now proposed to extend it to all ships and establishments at home.

Until lately it was the practice to withhold a portion of the wages of men who made allotments from their pay to relations at home, in order to safeguard the Crown against loss in case of desertion. Last year it was decided to abolish this allotment reserve, and the result has evidently been much appreciated by the men, as the number of allotments made during the past year has increased by upwards of 5,000, and there has been a material reduction in the number of applications made to the Admiralty for support by relatives of men in the naval service.

**Works.**

The contract for the graving dock, closed basin, and entrance lock, to be constructed at the new naval base at Rosyth, has recently been placed

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with an eminent firm of engineers, who are required to complete the work in seven years, and will be given a substantial bonus for each week that they can save on this time. The same inducement for early completion has been offered to the contractors for the new lock at Portsmouth which was ordered last August and is a matter of pressing necessity owing to the increased size of modern armoured ships.

A large increase of magazine accommodation has for some time been urgently required, and after careful examination of various sites in the United Kingdom for the establishment of a magazine dépôt, some property has been secured a few miles above Rosyth on the north shore of the Firth of Forth, and plans for its erection are being designed.

**Coastguard.**

The report of the Inter-Departmental Conference on the Coastguard was presented to Parliament last year, but, as indicated in the various statements made on the subject in both Houses of Parliament, no final decision has been arrived at as to the carrying out of the changes involved.

**Colonial Naval Affairs.**

Owing to the change of Ministry in the Parliament of the Australian Commonwealth, and pending a communication from the new Government, no further action has been taken to give effect to the scheme for the establishment in Australian waters of a local defence flotilla of destroyers and submarines, particulars of which were published in the parliamentary paper issued last session. The New Zealand Dominion Parliament has passed an Act, increasing the Colonial contribution to the Navy from £40,000 to £100,000 a year, unaccompanied by conditions. This is a gratifying instance of the readiness of the Dominion to assist the mother country in the heavy charges for the maintenance of the fleet. Both the Cape and the Natal legislatures have passed acts for the purpose of establishing branches of the Royal Naval Volunteer Reserve in those colonies, and a bill will be introduced in this session to give the necessary sanction of the Imperial Parliament, and a bill will also be introduced to sanction the arrangement by which the Canadian Government have undertaken to maintain for the Imperial Navy the naval establishments at Halifax and Esquimaux.

**Maritime Conference.**

A conference, representative of the principal naval Powers, was assembled in London at the beginning of December in order to establish, if possible, a general agreement as to certain doubtful points of international law, which it was important to decide before effect could be given to the convention for the establishment of an international court of appeal in prize cases.

The conference completed its labours at the beginning of this month, and a declaration has been signed dealing with some of the most important questions which arise in connection with the laws of naval warfare.

**Home.***Distribution of the Fleet.*

The new financial year will be marked by a further development of the Home Fleet. The Channel Fleet will be absorbed into it, and there will be a rearrangement of the cruiser squadrons and torpedo flotillas. The distribution will be as follows :—

There will be 16 fully-manned battleships in the Home Fleet, formed in two divisions, and associated with them will be six battleships of the Atlantic Fleet (which will in future use Dover as a base as well as Berehaven), making a total of 22 fully-manned battleships in home waters.

Ten fully-manned armoured cruisers formed in two squadrons will be attached to the Home Fleet, and associated with them will be the squadron of four armoured cruisers attached to the Atlantic Fleet, making a total of 14 fully-manned armoured cruisers in home waters, exclusive of five armoured cruisers employed at sea on training service.

There will also be in the fully-manned divisions of the Home Fleet 10 detached cruisers and scouts, 48 destroyers, and various auxiliary vessels.

The nucleus crew vessels (including the remainder of the destroyers) and the submarines, and the special service vessels with reduced nucleus crews, will be organised as two additional divisions of the Home Fleet, the 3rd and 4th, under a Vice-Admiral.

The opportunity will be taken of renumbering the cruiser squadrons in accordance with the new organisation.

The First and Second Cruiser Squadrons will form part of the first and second divisions of the Home Fleet. The name "3rd Cruiser Squadron" is reserved for the armoured cruisers of the 3rd division of the Home Fleet when combined. The 4th Cruiser Squadron will be the training squadron as at present. The Cruiser Squadrons attached to the Atlantic and Mediterranean Fleets will be the 5th and 6th respectively.

It was the intention of the Admiralty when the outlying colonial and foreign squadrons were withdrawn or reduced, to send powerful cruiser squadrons from time to time on visits to the stations so dealt with. An opportunity arose this autumn for such a cruise through the request of the High Commissioner for South Africa that a squadron might be present at Durban on the occasion of the opening of the South African Convention. The Second Cruiser Squadron was despatched to the Cape in September, and received a cordial welcome at the ports of Cape Colony and Natal. A number of the officers and men were also warmly received at the South African capitals and at Johannesburg. At the close of its stay in South Africa the squadron proceeded to South America, where complimentary visits have been paid at Rio de Janeiro, Monte Video, and Buenos Aires.

The exercises and cruises of the sea-going fleets have been satisfactorily carried out. The Channel Fleet is proceeding for a cruise to Lough Swilly for about 10 days. The Atlantic Fleet, having returned from Gibraltar, is now at Dover, as that harbour has become available for the use of a fleet. The Home Fleet, consisting of 57 vessels (of which 43 carry their full complement of officers and men), is now engaged in exercises in the North Sea.

I append the usual record of work done by the Department during the past year.

## Home.

**STATEMENT** showing the Net Expenditure from Naval Votes and Loans on account of Naval Services for the Years 1901-2 to 1907-8, together with the Estimates for 1908-9 and 1909-10.

Year.	Total Expenditure from Navy Votes (Net).	Annuity in Repayment of Loans under the Naval Works Acts.	Total Expenditure exclusive of Annuity. [Column (2) deducted from Column (1).]	Expenditure from Loans under Naval Works Acts.	Total of Columns (3) and (4)	Expenditure on New Construction (Vote 8).
	(1)	(2)	(3)	(4)	(5)	(6)
	£	£	£	£	£	£
1901-2 - -	30,981,315	122,255	30,859,060	2,745,176	33,604,236	8,865,080
1902-3 - -	31,003,977	297,895	30,706,082	3,198,017	33,904,099	8,534,917
1903-4 - -	35,709,477	502,010	35,207,467	3,261,083	38,468,550	11,115,733
1904-5 - -	36,859,681	634,238	36,225,443	3,402,575	39,628,018	11,263,019
1905-6 - -	33,151,841	1,015,812	32,136,029	3,313,604	35,449,633	9,688,044
1906-7 - -	31,472,087	1,094,309	30,377,778	2,431,201	32,808,979	8,861,807
1907-8 - -	31,251,156	1,214,403	30,036,753	1,083,663	31,120,416	7,832,589
1908-9 - -	32,319,500	1,264,032	31,055,468	948,262	32,003,730	7,545,202
(estimated)						
1909-10 - -	35,142,700	1,330,356	33,812,344	—	33,812,344	8,885,194
(estimated)						

10th March, 1909.

REGINALD McKENNA.

The following are the principal appointments and promotions which have been made :—Capitaine de Vaisseau—E. A. Jacquet to Command of Corsican Naval Division. Capitaines de Frégate—V. G. Voitoux to "Epée" and Command of 2nd Mediterranean Torpedo Flotilla; C. L. Estienne to "Francisque" and Command of 1st Ocean Torpedo Flotilla.—*Journal Officiel de la République Française*.

*Précis of M. Chaumet's Report on the Estimates: Present State of the French Navy.*—M. Chaumet states that the age of battleships has been fixed to count from the date of their launch. He draws attention to the slowness of the rate of construction, pointing out that the last unit of the battleships of the 1900 Programme was only completed ready for commissioning in August, 1908. These battleships were of a superior type to their foreign rivals when they were designed, but by the time they were completed they were relatively obsolete, and the same applies to the armoured cruisers.

"Our torpedo boats," he complains, "are of less tonnage than those of foreign Navies, while the displacement of these latter has steadily

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increased, that of French boats has decreased. The last group constructed, vessels of 98 tons, are of very doubtful value. They are not fit to keep the sea, when the weather is at all rough, and they have so little stability that it has been necessary to give them 3 tons of ballast. The necessary repairs also immobilise a large number of the boats, nearly 50 per cent. awaiting repair in the different ports.

"The greater part of the submarines and submersibles—those of small tonnage like the *Naiade*, *Phoque*, and *Dorade* types, with their limited sphere of action—can only await the enemy in the vicinity of their stations. It is only the submersibles and submarines of recent construction with a greater displacement that are capable of taking the offensive.

"Thus our first line does not really come up to the numbers given in our second table.<sup>1</sup>

"This is not all.

"The question next arises as to what extent we can depend upon our battleship squadrons, and the answer is not encouraging.

"A squadron is not only the sum of the units which compose it. It must be organised, coherent, and provided with all necessary auxiliaries.

"Even if we only had—which we have not—battleships which are homogeneous, it would not suffice merely to group them to have a squadron ready for battle.

"As an army is not constituted exclusively of infantry, so a fleet requires scouts, repeating ships, destroyers, properly-equipped mine vessels, and factory ships, which can carry out urgent repairs."

M. Chaumet then proceeds to point out that the battle fleet is unprovided with any of these special adjuncts, although it is asserted in some quarters that there is no need for special scouting vessels, as this duty can be carried out by the armoured or protected cruisers, or even by fast mail steamers transformed into auxiliary cruisers or by destroyers. He does not, however, consider it prudent that the armoured cruisers should be employed in scouting work, as they might be drawn into such a position by the enemy, that without the speed to avoid an action, they would yet be too weak to accept with chance of success. The protected cruisers are almost as inoffensive as mail steamers, and without the necessary speed. Auxiliary cruisers, provided they have the necessary speed, should be requisitioned from the Mercantile Marine and made as much use of as possible in time of war.

It would be wise, in M. Chaumet's opinion, to comply with the demand made by Vice-Admiral Germinet, when in command of the Mediterranean Fleet, and build at least four scouts for service with that squadron. These ships should not cost very much, as they would only be of sufficient tonnage to be able to keep the sea in all weathers, while for armament it would only be necessary to give them guns to protect themselves against the attacks of destroyers, and in this connection M. Chaumet recalls the evidence given by Vice-Admiral Pottier, at that time Commander-in-Chief in the Mediterranean, before the Commission of Enquiry, in 1894, who stated that "if he had his way, he would not arm vessels of this class, so that they should not be tempted to fight. The sole duty of a scout should be to discover the enemy and then report the fact immediately.

<sup>1</sup> French Naval Notes, page 389, March JOURNAL.



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If the enemy fired at her and she carried guns, she might be tempted to reply, and thus not carry out her first duty." Destroyers could not act efficiently as scouts; their radius of action is too limited, and their displacement too small to allow of their maintaining in bad weather their nominal speed, and they would soon be at the mercy of the enemy. Moreover, there are not enough of them for any to be spared for scouting duty, as a squadron of 12 battleships and 6 cruisers would alone require at least 24 for its efficient protection.

M. Chaumet considers that repeating ships can be found, if necessary, among the small cruisers; while it is also necessary that some of them should be fitted out as mine ships, bearing in mind the important part floating mines played in the Russo-Japanese War. In view of the dangerous nature of this mine work, it is necessary that the men who would have to handle them in time of war should be thoroughly trained in peace. Another serious defect in the ships of the fleet, to which attention is drawn, is that only one range-finder is supplied to each battleship and cruiser, and this is placed in an exposed position, unprotected in any way, so that it might quite possibly be destroyed by the first shot fired. It is advisable, in his opinion, that at least two should be supplied, and that they should be placed in the conning towers.

M. Chaumet next points out that battleships, destroyers, or even submarines, do not by themselves constitute a war fleet. There must be proper reserves of guns, projectiles, torpedoes, ammunition, coal, and stores of all kinds, and, above all, there must be a sufficiency of docks and repairing basins, and unless all these conditions are fulfilled, "we have a fleet only outwardly in appearance, but not one ready for war."

Coming to the question of the *personnel*, the only battle squadron is that in the Mediterranean, which is composed of two active and two reserve divisions. The two active divisions ought to be in full commission with their crews complete, but nevertheless they are, on an average, 500 men short of their complement. Similarly the two reserve divisions have only just sufficient men on board to keep them clean, but not enough to take them to sea. The result is, that in case of mobilisation there are three courses open, each of which is fraught with danger:—1. Either to wait until the men to complete the effectives arrive from Brest, Lorient, or Toulon, as the case may be; 2. Or the two active divisions must leave without the two reserve ones; 3. Or the whole 4 divisions will have to leave with their effectives incomplete.

There can be no question that the battle squadron should always have its effectives complete, so as to be ready to weigh at once at the first signal. In order to bring the reduced crews of the 3rd and 4th divisions up to full strength, 885 petty officers and men will be required, and if to these the 500 men short in the two active divisions are added, some 1,300 men in all must be drawn from somewhere before the fleet can put to sea fully manned. In addition, there are continual complaints from the torpedo flotillas, the engines and boilers of which require constant and careful attending to, of the shortage of engine-room mechanics and stokers.

The constant changes in the *personnel* of the ships, both among officers and men, is also to be deplored, 50 per cent. being disembarked annually; the result being that, although the period of service on board is fixed by the regulations at three years, the warrant officers, petty officers

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and men remain, as a rule, less than two years on board. Some of these changes are, of course, unavoidable, but in the Mediterranean Fleet alone over a thousand men are disembarked every year, and it ought surely to be possible to regulate things better than this.—*Rapport par M. Charles Chauvet (Budget Général de l'Exercice, 1909, Ministère de la Marine).*

(To be continued.)

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*New Submarine Salvage and Dock Ship.*—The *Vulcan*, Germany. the first combined submarine salvage and dock ship to be built, was launched from the Howaldt Works in Kiel on 1st October, 1907, for the German Navy. The vessel, which is 227 feet long, is really made up of appliances so that it can be used for both raising and docking a submarine which has come to grief. Above the middle of the two parts of the ship is a powerful crane, with a lifting capacity of 500 tons, which will hoist the submarine out of the water, and place her on supports, where she can be repaired; the crane is worked by electric power; the ship's primary engines being worked by steam, which provide the necessary electrical energy for working the crane, and also supplying the submarines, while giving the ship a speed of 12 knots.

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## MILITARY NOTES.

The following are the principal appointments which have been made :—

*Home.*—Major-Generals—W. J. Chads, C.B., to be Colonel of the Border Regiment; C. Crutchley, M.V.O., to be Lieutenant-Governor and Secretary of Royal Hospital, Chelsea. Colonels—Sir Godfrey V. Thomas, Bart., C.B., D.S.O., to be a temporary Brigadier-General to Command the Artillery of a Division; L. E. Kiggell, C.B., to be a temporary Brigadier-General in Charge of Administration.

*India.*—General Sir O. M. Creagh, V.C., K.C.B., to be Commander-in-Chief, East Indies.

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*Précis of the Annual Report of Recruiting for the Year ended 30th September, 1908. Army, Militia, Imperial Yeomanry, and Special Reserve.*—The Report is divided into four parts :—

I.—General Observations on Recruiting for the past year.

II.—Army Reserve.

III.—Militia, Imperial Yeomanry, and Special Reserve.

IV.—Civil Employment of Discharged Soldiers and Reservists.

## Home.

## 1.—GENERAL OBSERVATIONS ON RECRUITING.

The number of recruits who joined the Regular Army, excluding re-enlisted men and those for Colonial Corps, amounted to 37,175 for the twelve months under review. This total shows an increase of 2,259 as compared with the previous twelve months.

This increase may be partly attributed to the fact that recruiting for the Mounted Corps has been practically unrestricted during the year.

There has been a marked increase in the number of recruits obtained in the Regimental Districts, due probably to the general depression of trade. This increase is the more remarkable considering that Recruiting Agencies throughout the year have been disorganised by the abolition of 23 Militia Battalions with the consequent loss of their Permanent Staff, the conversion of the remainder of the Militia into the Special Reserve, the reorganisation of the Imperial Yeomanry and the Volunteers, and their transfer into the Territorial Force. These changes necessarily occupied the attention of the Permanent Staff, and especially in the case of the Volunteers, threw increased work on the Sergeant-Instructors, who thus had less time available for recruiting.

A change of considerable importance took place on the 1st April, 1908. Hitherto the recruiting in Grouped Regimental Districts was supervised by Brigadier-Generals Commanding. These officers now assumed the Command of Territorial Divisions and the work of recruiting was transferred to the officers in charge of Infantry Records, whose designation became that of Os.C. Districts.

The rules governing the enlistment of Special Reservists into the Regular Army are laid down in the leaflets dealing with recruiting for the Special Reserve. It was decided that Special Reservists, if under the age of 18, might enlist into the Regular Army provided they had completed their six months' recruits' training. The reason for the relaxation of the age for enlistment to below the age of 18 being that it was thought preferable such lads should be given the opportunity of passing direct into the Regular Army rather than be sent back to their homes for possibly a few months, during which they might find it difficult to obtain employment, and would consequently deteriorate. Man's pay on enlistment into the Regulars is given to these lads, even though under the age of 18, on the grounds that they have already performed twice the amount of ordinary recruits' training. Any other recruits enlisting under the prescribed age still continue to receive boy's pay until they reach the age of 18, as they have received no military training before enlistment.

Owing to the reorganisation of the Volunteer Force and the abolition of a number of Militia Battalions, it became necessary to make an alteration in the distribution of non-commissioned officers of the Foot Guards as members of the Permanent Staff. For recruiting and other reasons it is desirable, since the regiments of Foot Guards are not localised as regards their recruiting, to allow them to have representatives of the several regiments on the Permanent Staff of units in the several areas from which each regiment draws its recruits. After consultation with the Officers Commanding, a fresh distribution was made by Army Order 200 of 1908, and certain battalions of either the Special Reserve or the Territorial Force are affiliated to each regiment of Foot Guards.

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The following table shows the total number of Recruits joined (exclusive of re-enlisted men and those for Colonial Corps), the numbers taken under any of the standards, and the percentage under standard, during the twelve months ended 30th September, 1908, as compared with the previous four years :—

	Year ended 30.9.04.	Year ended 30.9.05.	Year ended 30.9.06	Year ended 30.9.07	Year ended 30.9.08
Total Recruits joined ...	41,279	35,351	36,410	34,916	37,175
Number under any of the standards	531	220	460	696	844
Percentage under standard	1.2	0.60	1.26	1.99	2.27

The number of Militiamen and Special Reservists who joined the Regular Forces during the past year is given below. It must be borne in mind that a considerable number of these are shown in the Militia and Special Reserve figures as recruits for those forces :—

Corps which the men joined.	12 months ended 30.9.04	12 months ended 30.9.05.	12 months ended 30.9.06.	12 months ended 30.9.07.	12 months ended 30.9.08.	
					Militia.	Special Reserve.
Regular Army ... ..	14,932	12,103	12,409	12,113	7,515	3,955
Royal Navy or Royal Marines ... ..	716	330	603	646	420	89
Total... ..	15,648	12,433	13,012	12,759	7,935	4,044

**II.—ARMY RESERVE.**

The strength of the Army Reserve has increased considerably during the past twelve months, and on the 1st October, 1908, stood at a total of 133,949. This continued increase will soon cease and the Reserve will shortly commence to diminish in number.

In consequence of the inflated strength of the Army Reserve, enlistment and re-engagements in Section "D" were suspended from the 1st of July last. Certain exceptions and modifications were made as to the men in section "D" who were to be allowed to re-engage, while in the case of the Royal Engineers, Section "D" was closed for men of certain trades whose services would not be required.

It had been observed that Section "A" of the Army Reserve had never been completed in the past to its full establishment. Exhaustive enquiries were made to elicit the reasons for this deficiency, and, as a result, a fresh leaflet was prepared, setting forth the conditions of service in this Section, and an amendment was made in the Reserve Forces Act by which the period of service in the Section was extended from one year to two years. Men, as hitherto has been the case, are enlisted for one year but may re-engage for a further term, a considerable increase in the strength of the section has resulted from these changes.

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Recruiting and re-engagements for the Railway Reserve, Royal Engineers, ceased in March last.

**III.—MILITIA, IMPERIAL YEOMANRY AND SPECIAL RESERVE.**

The important change which has taken place in the twelve months under review by the abolition of the Militia and the institution of the Special Reserve calls for particular notice.

A Special Army Order was issued on the 23rd December, 1907, explaining fully the alterations which were to take place and the method by which those units of Militia which it was decided to retain were to be converted into units of the Special Reserve. The change involved the reduction of 23 Militia Battalions. The whole of the Royal Garrison Artillery Militia, with the exception of the Cork, Londonderry and Antrim Royal Garrison Artillery Militia, were converted into Royal Field Reserve Artillery units. Later a modification was made, and the Londonderry Royal Garrison Artillery Militia also became a Field Reserve Artillery unit.

Certain brigades of the Royal Field Artillery were designated as Training Brigades for the recruits of the Royal Field Reserve Artillery Units.

The two battalions of the Royal Engineer Militia were converted into Siege and Railway Companies of the Royal Engineer Reserve, while the Royal Army Medical Corps Militia was disbanded.

In the case of the Infantry 74 of the Old Militia Battalions were selected to become the Reserve Battalions of their Line Regiments, while 27 became extra Reserve Battalions. It became necessary to form a sub-depôt for the four Reserve Battalions of the King's Royal Rifle Corps and the Rifle Brigade at which recruits of the Special Reserve could be trained, the Rifle Depôt at Winchester being inadequate for the purpose.

The terms of service, standards of height and age, were laid down in the Army Order, and are practically those which were in force in the Militia. The recruits of the Special Reserve train for six months on enlistment and 15 days annually, while the Infantry perform six days' musketry training in addition. The pay of the Special Reserve is at Army rates, and the messing allowance is also granted if the recruit is 18 years of age. Bounties and Non-Training Bounties are paid on a scale similar to that of the Militia.

Recruits are allowed to enlist from the Special Reserve into the Regular Army on completion of three months' recruits' training if 18 years of age, and on the completion of 6 months' recruits' training if under the age of 18. Except in the case of the Royal Engineers, in which Corps good tradesmen may be enlisted up to the age of 35, the maximum age for a recruit for the Special Reserve has been fixed at 30. This limit of age has caused considerable comment, and it has been pointed out that ex-soldiers are thereby debarred from enlisting into the Special Reserve on the termination of their Army and Reserve engagement. The point, however, is overlooked that these Special Reservists are required in time of war to take their places as drafts for the Regular Army. An ex-soldier, on completion of his 12 years' service, cannot be less than 30 years of age, and may be considerably more, while if he has taken advantage of his opportunities and enlisted and served four years in Section "D" of the



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Reserve, he must at least be 34 years of age. To enlist such ex-soldiers into the Special Reserve would mean that the drafts for the Regular Army in time of war would be liable to be composed to a considerable extent of men who would be less fitted to undergo the arduous work of a campaign.

In consequence of this reorganisation, recruiting for the Militia (all Arms) ceased on the 15th January, 1908, and enlistments for the Special Reserve commenced on the following day. Inasmuch as Special Reserve recruits drill for six months on enlistment as compared to forty-nine days in the Militia, it is clear that recruits enlisting during the early months of the year are kept at the dépôts during the summer months, when they might reasonably expect to obtain employment. As was to be expected, therefore, recruiting for the Special Reserve compared unfavourably at first with that for the Militia, but as the changes made became appreciated and the year advanced, recruiting has gradually improved and is now proceeding at a higher rate than for the Militia.

It was originally intended that recruits who did not join the Army after three months should complete their full period of six months' recruits' training. It was found, however, that in the majority of the Districts this was impossible owing to the lack of range accommodation, and it was therefore decided that Special Reserve recruits under 18 years of age might join the Army after five months' drill on enlistment, subject to their parents' consent being obtained, in cases where the six months' drill could not be completed on this account. Recruits who are sent to their homes will have to complete their recruit's course of musketry prior to their annual training the following year. In fixing the period of the recruit's training at six months the intention was by substituting a lengthened period of initial training to shorten the period of annual training, as it was hoped that employers of labour would find it less difficult to spare their men for their annual training than was the case in the Militia when that training was for a period of twenty-eight days. These intentions, however, as regards the first annual training of recruits have been frustrated by the lack of range accommodation.

The numbers who accepted either of the alternatives put before them are shown in the table given below :—

	Militiamen.		
	Who joined the Special Reserve.	Who remained Militiamen, and were still serving 1.10.08.	Who took a free discharge.
Royal Field Artillery ...	131	14	14
Royal Garrison Artillery ...	7,425	1,368	412
Royal Engineers ...	1,201	79	50
Infantry ...	39,905	6,411	9,183
Royal Army Medical Corps ...	84	513	159

The number of recruits enlisted for the Militia up to the 15th January, 1908, when recruiting was stopped, was 8,223, divided among the several arms as shown in the table below :—

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R.F.A.	R.G.A.	R.E.	Infantry.	R.A.M.C.	Total.
72	407	72	7,499	173	8,223

Recruiting for the Special Reserve commenced on the 16th January, 1908, and the number of recruits taken up to 30th September amounted to 17,781, divided among the several arms as follows :—

Cavalry.	R.F.A.	R.G.A.	R.E.	Infantry.	Total.
4	2,227	139	144	15,267	17,781

*Imperial Yeomanry.*

The organisation of the Imperial Yeomanry has also been the subject of alteration, the whole of the Yeomanry becoming part of the Territorial Force with the exception of the two units in Ireland, which were transferred to the Special Reserve, and were respectively named the North Irish Horse and the South Irish Horse. All recruits for these two units are enlisted for the Special Reserve, and a Special Army Order was issued on the 19th June, 1908, dealing exhaustively with the conditions under which the men serving in the two units could transfer to the Special Reserve. Serving Yeomen who elected transfer to the Special Reserve were given a bonus of £2 for accepting the liability for service abroad. The number who joined the Special Reserve was 448, while 426 took a free discharge.

## IV.—CIVIL EMPLOYMENT.

The organisation for dealing with the employment of ex-soldiers has remained unchanged during the past year. It was considered advisable that the County Associations should be given time to arrange the other matters with which they are charged before taking over the care of Reservists and Discharged Soldiers as laid down in the Territorial and Reserve Forces Act, 1907. The method by which the change is to be made and the system to be adopted has been the subject of considerable discussion in the War Office, and it is hoped that it will soon be possible to devise a sound and practical system of working. The organisation required is one which should bring the several County Associations in touch with, not only the Military Branches dealing with the question of Civil Employment, but also with the numerous private organisations and Regimental Associations which are interested in the same object.

The Army Council has been in communication with the Central Emigration Board on the subject of assisting Army Pensioners who wish to emigrate with a view of obtaining work in British Colonies.

A leaflet has been drawn up by the Board containing useful information on the subject and stating how Army Pensioners can be assisted by the Board should they desire to take advantage of the facilities afforded.

To assist time-expired men in procuring employment when sent home from abroad for transfer to the Army Reserve, a circular was sent out in June last giving instructions that men who arrived from abroad and had still a short period of unexpired service to complete before being due for

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actual transfer to the Reserve might be allowed to take their transfer at once provided they could produce satisfactory evidence that they have obtained employment in civil life.

A circular has been issued to secretaries of County Associations calling attention to the fact that when necessary to employ clerks in their offices the services of ex-soldiers might be utilised, and recruiting officers have been informed that the cost of advertising lists of ex-soldiers eligible for civil employment may be charged against recruiting advertisement funds.

*General Remarks as to Civil Employment.*

The following table records the number, who left the Colours with characters entitling them to registration for civil employment. The actual number for whom employment was found by means of Official Registers, Employment Societies, and Departments under the War Office, is shown below. It will be seen that, while 23,974 men have returned to civil life from the Army with characters either Good, Very Good, or Exemplary, no less than 20,960 ex-soldiers have either been provided with employment or have found situations :—

Number discharged or transferred to the Reserve with	"Exemplary" characters ... ..	6,495
	"Very good" characters ... ..	10,794
	"Good" characters ... ..	6,685
	Total ... ..	23,974
Number of men for whom employment has been found.	War Office Register (Messengers, etc.) ... ..	35
	Regimental and Recruiting Registers (affiliated to National Association) and National Association (Branches) ... ..	7,039
	National Association (London office only) ... ..	1,572
	Soldiers' and Sailors' Help Society (London office only) ... ..	889
	Army and Navy Pensioners' Employment Society ... ..	739
	Guards' Employment Society ... ..	168
	Departments under the War Office.	
	Army Clothing Department ... ..	3
	Works and Fortifications Department ... ..	49
	Ordnance Factories ... ..	76
	Army Service Corps Services ... ..	745
	Army Ordnance Department ... ..	220
	Clerks in War Office ... ..	27
	Writers under Army Accounts Department ... ..	4
	Teachers, etc., in Army Schools ... ..	11
To these may be added	Men who are known to have themselves obtained employment ... ..	9,383
	General Total ... ..	20,960

In view of the condition of the general labour market during the past twelve months the results obtained during the year may be considered as satisfactory.

**CONCLUDING REMARKS.**

It will be seen that the total number of recruits taken has considerably exceeded that of the previous year. As regards the class, the reports

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from Regimental Districts speak favourably, and the men are stated to be uniformly well-behaved.

It is probable that the small amount of trouble given by recruits at the dépôts is partly attributable to the necessity of each recruit having to produce a character, which prevents many undesirable men from enlisting. The Army Form used for the purpose of obtaining the characters of recruits offering for enlistment has been revised with a view of bringing it into harmony with the Soldier's and Seaman's False Characters Act, 1906, and to allow the provisions of that Act to be operative in cases where false characters have been deliberately given.

The standard of education of recruits is improving. All recruits on enlistment are tested by Army Schoomasters as to their educational attainments. The results are shown in the table in Section II., Part VIII. It will be seen that a considerable percentage of infantry recruits are still either practically illiterate or of inferior education. There is no reason to believe that these men have escaped compulsory education when young, but the fact remains that a considerable sum of money has to be devoted from Army Funds to re-educate soldiers who have forgotten what they were originally taught. Modern warfare requires a higher standard of individual intelligence, and for this reason no soldier can draw proficiency pay until he has obtained a third class certificate of education.

As regards wastage it is satisfactory to note that there is a still further diminution in the number of recruits discharged as invalids, while the numbers discharged not likely to become "efficient" and for "misconduct" again show a further slight decrease.

The recruits for the Special Reserve are generally well reported on. In several instances it is stated that a class of recruit is coming in who would not have enlisted into the Militia. The standard of education in many districts is considered higher than that of the Militia recruit, and recruits are readily availing themselves of the facilities afforded them of attending school at the dépôts. All districts report that considerable numbers enlist into the Special Reserve with a view of passing eventually into the Army, but it is too soon to form a definite opinion on this point.

The Special Reserve recruit is kept so much longer under instruction at the dépôts that the want of accommodation in almost every dépôt has been severely felt. As a temporary expedient Line recruits have had to be sent either direct to the Home battalions on enlistment, or immediately after being clothed at their own dépôt. This procedure is regrettable, as the dépôt staff is more accustomed to deal with recruits and their training than are the non-commissioned officers of Home battalions, and the recruit's training is not so liable to suffer interruption at the dépôt. In some instances, owing to want of accommodation, the messing arrangements have had to be altered, and the rooms set apart as dining rooms under the restaurant system have had to be given up and utilised as barrack rooms.

It may be that at present the average number of recruits who will be under training at dépôts cannot be accurately determined until the present system has been in force for some time longer, but when experience has shown what the requirements of the dépôts will be as regards accommodation, it is very desirable that these should be met, and that it should

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not be necessary to disturb the arrangements already in existence for the comfort of the soldier.

The want of range accommodation in connection with the depôts has been already commented on.

Mention was made in last year's report of the system of physical training which was then under trial. This system has now been permanently adopted, and the Manual of Physical Training has been approved and issued.

The regulations provide that recruits should complete sixty attendances at physical training before being taken for company or other training. Once these attendances have been completed, discretionary power is left to commanding officers to decide as to the further training to be undergone.

The Inspector-General of the Forces brought to notice in his report for 1907 that the physical training of the Royal Horse and Field Artillery had been in abeyance. Instructions were at once issued by circular letter that this important matter was not to be neglected, but that the regulations laid down in the manual were to be adhered to.

The changes made during the past year by the conversion of the Militia into the Special Reserve, and the alteration of the status of the Volunteer Force, have been so gradually effected that the results have not materially disturbed recruiting during the past year. Where reductions in the Permanent Staff have taken place non-commissioned officers have remained supernumerary pending absorption, and thus have still been available for recruiting duties. When all supernumeraries have been absorbed it is probable that an increase in the number of paid pensioners employed on recruiting duty may be necessary to compensate for the reductions made.

In the past the Militia training necessitated the Permanent Staff employed as recruiters being taken away from this work for a considerable period during the spring and summer months. The substitution of paid pensioners may be beneficial by maintaining a more even flow of recruiting during the summer months, as their work will be carried on continuously throughout the year.

During the next two or three years recruiting requirements will considerably diminish inasmuch as the wastage by transfer to the Reserve will be less, and the loss to the Service by invaliding, desertions, etc., is showing a steady reduction. It will, in all probability, be possible to raise the physical standard for the Infantry of the Line and at the same time to still further raise the status of the soldier by insisting on an even more rigid character test than is demanded at present.

The War Office report recently presented to Parliament<sup>1</sup> shows the steps taken to provide technical instruction to soldiers to fit them for civil life, and it rests with the men themselves to avail themselves of the opportunities afforded, so that, on discharge or transfer to the Reserve, they may be qualified to take up the class of employment for which they are best suited.

C. CRUTCHLEY, *Major-General,*  
*Director of Recruiting.*

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<sup>1</sup> Command Paper 4059.



**Austria-Hungary.** *Automobilism in the Austro-Hungarian Army: Organic Regulations.*—In the *Verordnungsblatt*, of the 28th January, appeared an important Order, bearing date of the 23rd January, relative to Automobilism in the Austro-Hungarian Army.

This Order came into force on the 1st February. Its exact title is: *Provisional Organic Regulations for Automobilism in the Austro-Hungarian Army.*

#### 1.—General Regulations.

The automobile service is carried out by:—

- The experimental section for automobiles (Vienna);
- The automobile cadre (Klosterneubourg);
- The technical agents attached to the commandants of territorial districts (army corps).

*The Department of Military Automobilism.*—The chief of the experimental section is at the same time director of the military automobilism. In this capacity he acts as adviser of the Minister of War on all questions connected with automobilism. His duties are:—

1. To study and follow the progressive development of automobile technique;
2. To study all technical or organic questions relating to automobilism, to recommend measures to be taken, and the issue of regulations and instructions;
3. To order, carry out experiments with, select all the motor vehicles for the Army, and regulate their employment and keeping in repair;
4. To regulate the theoretical and practical instruction of officers or non-combatants ranking as such, and of soldiers in view of the service of mechanical trains or motor wagons;
5. To have the control of all motor vehicles, whether belonging to the Army or to private owners;
6. To follow the development of automobilism abroad.

*The Automobile Cadre.*—The automobile cadre comprises the instructional and the factory (*atelier*) sections.

The duties of the instructional section are:—

1. Participation in the instruction of the personnel, in particular of the drivers of all the military motor vehicles;
2. Control of the drivers, soldiers, and the personnel of all the Army motor vehicles;
3. Regulation of the employment of all the Army motor vehicles; superintendence of the keeping in repair of those which are not included in the automobile cadre, and the proper maintenance of the others.

The *atelier* is charged with the duty:—

1. Of executing in the factory repairs and other work;
2. Of examining the repairs and other work carried out in civilian establishments.

The Director of Military Automobilism has, in respect to the automobile cadre, the rights of a chief of a corps.

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*Technical Agents.*—Attached to each commandant of a territorial district (army corps) is an officer specially instructed in automobilism, in the capacity of technical agent.

He is specially charged with the control of the military drivers of the territorial district, and of the mobilisation as far as automobiles are concerned.

**2.—Peace Effectives.****1. Experimental Section :—**

- 1 superior officer or captain, chief of the section;
- 2 subaltern officers;
- 2 secretarial non-commissioned officers (draughtsmen);
- 4 soldiers, of whom 3 are orderly clerks and 1 orderly.

**2. Automobile Cadre :—****(a) Permanent Effective (4 officers or functionaries, 39 men).—**

- 1 captain, commanding the cadre;
- 2 lieutenants or sub-lieutenants;
- 1 technical official, head of the factory;
- 1 sergeant-major;
- 1 accountant non-commissioned officer;
- 1 sergeant-major or work-superintendent for service in the factory;
- 36 soldiers (1 sergeant, 5 corporals, 6 first-class soldiers, 18 workmen for factory, 1 tailor, 1 bootmaker, 1 cook, and 3 orderly clerks).

**(b) Complementary (War Footing) Effective.** — The complementary effective varies according to the number of vehicles on service, in the proportion of : 2 men per vehicle or automobile train for heavy loads (1 conductor, 1 assistant); 3 men per road locomotive (1 driver, 1 assistant, 1 chauffeur); 1 man (chauffeur) per automobile for persons, per motor-cycle or motor-trailer.

Under the designation of "vehicles in service," are included the vehicles employed by the troops, establishments, etc., as distinct from those of the cadre, besides those employed by the cadre on the occasion of the manoeuvres, other exercises, trials ordered by the minister, etc.

The complementary effective is, therefore, employed partly for outside duty with the troops and in the establishments; partly—but only for a temporary cause and in variable number—in the cadre, or in the automobile formations organised by the cadre.

The officers and men of the experimental section and the officers of the automobile cadre are *à la suite* of their regiments.

The officials and men who form part of the permanent effective of the cadre are attached to it and form a special corps.

The men of the complementary effective on service with the cadre are considered as temporarily detached. Those who are on duty apart from the cadre count in the troop or establishment where they are serving. Those who are detached with the Government automobile postal lines are *à la suite* of their regiment.

**(c) Motor Vehicles Park.**—This includes all the motor vehicles belonging to the Army (wagons or automobile trains for heavy loads, automobiles for persons, motor-cycles, road locomotives, and special motor vehicles of all

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kinds). These vehicles are on service partly with the *cadre* and partly on outside duty.

**3.—Recruiting.**

The recruiting of the *personnel* is carried out as follows :—

Officers : regimental officers (special instructions ; qualifications).

Officials : work managers (by promotion) ; other arsenal employees who are qualified (by transfer).

Men of the *permanent effective* : men from the regiments, as soon as possible, in principle, after the conclusion of the recruit training.

Men of the *complementary effective* : drivers taken from regiments, requisitioned for the term of this service directly by the automobile *cadre*.

Reservists : old soldiers of the *cadre* passed into the reserve ; assignment by order of the Minister, of drivers among the troops and the establishments.

The other drivers (assistant drivers, chauffeurs), except those of the Pioneers, are, on passing into the reserve, assigned to the train division of each army corps.

**4.—Clothing and Arms.**

All the officers and officials of the experimental section, of the *cadre*, the technical agents, and all the men wear on the facing of the collar a special distinguishing mark.

The men of the *permanent effective* and those summoned to the *cadre* for a period of training wear the uniform and equipment of the squadrons of the Mountain Train.

The armament consists of :—

For non-commissioned officers other than sergeants : cavalry sabre and revolver, with 15 cartridges in time of peace.

For the men specially affected to the corps : a repeating rifle with bayonet and 30 rounds (10 in time of peace).

The other men have the uniform, equipment and arms of their corps.

On service, on the vehicles, the men wear leather upper clothes ; in the factory they are made of dark blue material. For officers, the wearing of leather clothes is optional.

**5.—Instruction.**

This is provided for by special regulations.

A short time ago we described the creation in Austria of a *motor corps* (volunteer automobilists and motor-cyclists).

The organisation of the military automobilism has followed close on this new creation. These two recent measures show with what attention in Austria-Hungary the adaptation to the needs of the Army, of the resources which the Empire possesses in automobiles is being regulated.

*Formation of new Machine Gun Detachments.*—Up to the present in the *Landwehr*, as in the Common Army, there has been a 2-gun detach-

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ment of machine guns with each regiment of infantry. To each of the 11 Alpine battalions was assigned a 4-gun detachment.

According to the latest information, this distribution will be modified. In future each non-Alpine battalion, and not each regiment, of Austrian *Landwehr* will receive a detachment of 2 machine guns. This will be an increase of 71 detachments. The Austro-Hungarian Army will then possess: 284 infantry machine gun detachments (eleven of 4 guns) (138 in the Common Army, 118 in the Austrian *Landwehr*, 28 in the Hungarian *Landwehr*); 5 cavalry machine gun detachments of 4 guns each (3 in the Common Army, 1 in the Austrian *Landwehr*, 1 in the Hungarian *Landwehr*); in all, 289 detachments with 608 machine guns.—*Revue Militaire des Armées Étrangères*.

**Belgium.** *The Fortifications of Antwerp.*—The Bill of 30th March, 1906, provided an extraordinary credit of 48 million francs (£1,920,000) for the reconstruction of the fortifications of Antwerp.

The Bill of the 18th August, 1907, has increased this amount by another 1,673,000 francs (£66,920), bringing the total up to 49,673,000 francs (£1,986,920).

Moreover, it is estimated that the sale of military lands which have become disposable at Antwerp and Termonde will produce 15 million francs (£600,000).

The whole sum thus allotted to the improvement of the defences of Antwerp is thus 64,673,000 francs (£2,586,920). Of this amount, 46,640,000 francs (£1,865,600) is to be expended on the works of the advanced line, and 18,033,000 francs (£721,320) to those of the second line.<sup>1</sup>

On the other hand, the armament and provision of the necessary munitions requires an expenditure of about 32 million francs; 6 millions (£240,000) have been provided up to the present for this purpose: 500,000 francs (£20,000) in the Budget for 1906, 5 millions (£200,000) in the Budget for 1907, 500,000 francs (£20,000) in the Budget for 1908; 2 of these 6 millions have not yet been expended.

There remains, then, a total of 28 millions (£1,120,000) to be demanded from the Chambers.

"The approaching date at which the Government expects that a portion of the works will be completed—the commencement of 1913—and the necessity of by then having the armament which they are to receive, will oblige the Belgian gun-making establishments, although aided by national industry, to make a considerable effort. . . . Moreover, in order to avoid laying down special and very costly manufacturing plant, it will be necessary to order without delay certain guns abroad to be used in the defence of the Lower Scheldt. As the time required for the construction of this heavy artillery *matériel* will considerably exceed the period covered by the Budget, it will be necessary to take certain credits in advance. In order to be in a position to face the situation,

<sup>1</sup> Report to the Chamber of Representatives on the Budget for War for 1909.

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it is of importance that the Government shall have at its disposal a fund which will allow it, within a fixed limit, to anticipate in some measure future Budgets, and at the same time arrange that the charge shall be distributed over the period on which it ought to fall."<sup>1</sup>

The Belgian Government has therefore deposited a Bill, proposing the creation of a special fund of 9 million francs (£360,000) for the armament of the new works at Antwerp. This fund will be supplied by the Extraordinary Budget, the sum thus advanced being repaid from the Ordinary War Budgets by annual instalments of not less than 1,500,000 francs (£60,000).

An important order for mines intended to protect the channels of the Scheldt was given in February, as the result of experiments which have definitely fixed the type to be employed.

The name of the Fort of Rùpelmonde has been changed, and in future it will be known as Fort Steendorp.

It is reported that the work of demolishing the fortifications of Termonde, in consequence of its dismantlement, will be commenced this spring.

—*Revue Militaire des Armées Étrangères.*

**Servia.** *The Army.*—Servia has adopted the principle of personal and obligatory military service. The total length of service is 33 years, of which 2 must be in the Active Army, although this 2 years' period is by no means rigorously enforced. Numerous cases of exemption under the law allow a great many young men only to remain with the colours 18 months, a year, and sometimes even merely 8 months.

It is on the ground of farm work that the largest number of exemptions are granted, and in these cases only 8 months' service is put in. Young men who have received certain educational diplomas are allowed to serve for one year, on condition that at the end of their year a standard of efficiency, fitting them for the position of a non-commissioned officer or officer in the Reserve, has been attained.

Then, again, the exigencies of the Budget exercise considerable influence on the time which the great mass of the contingent serve with the colours. The result of this state of things is, that there is great inequality in the training of the mobilisable troops, making it very difficult to estimate their real value. It is believed, however, that, out of a population of a little less than three millions of inhabitants, Servia at a pinch could mobilise about 300,000 men.

Out of these 300,000 men, 150,000 in round numbers constitute the Active Army, including the Reserve. As a rule, in peace time, the number of men serving with the colours is 25,000.

The Militia (1st and 2nd Ban) should furnish about 150,000 men. But the cadres would probably prove unequal for the organisation of so large a body of men.

The Servian infantry, on a peace footing, comprises 30 regiments, coupled by twos in brigades. The regiment consists of two battalions.

<sup>1</sup>Bill No. 91 laid before the Chambers.



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The strength of the battalion seldom exceeds 400 men, and is often below that number. On a war footing the effective strength of the battalion is about 1,000 men.

The Militia forms, in the event of mobilisation, 30 regiments of the same organisation as the Active Army, with the men of the 1st Ban, and 15 other regiments with those of the 2nd Ban. There are, in addition, in the infantry, two special battalions styled "Frontier Guard." The special duty of these two battalions is to watch the Macedonian frontier.

The infantry wear a very dark blue jacket, with piping and green collar and grey trousers. The buttons are copper, and shoulder straps bear the number of the regiment. In undress the men wear a forage cap; in full, a blue képi, with a green and black plume. The officers wear a tunic with two rows of buttons and, in undress, the Russian cap.

In full dress the soldiers wear the Russian boot, but ordinarily they use the *opanka*, a sort of sandal, which is the national foot-gear.

The Militia is not dressed like the Active Army. The clothes are made of a dark grey cloth, manufactured in the country with green collar and cuffs, as in the Active Army.

The cavalry comprises:—

First: A division of independent cavalry, composed of two brigades of two regiments each.

Secondly: A regiment not formed into a division. In addition, there is a squadron of Cavalry of the Guard.

The regiments have four squadrons, each squadron counts a hundred horses.

In case of mobilisation, 10 squadrons are formed with the reserve of the Active Army. These squadrons are attached to the infantry divisions. The Militia also furnish an equal number of squadrons.

The Servian cavalry, when mobilised, should have a total strength of about 7,000 horses.

The Royal Guard wears a smart Hussar uniform. The headdress is a black sheepskin busby with a white plume. A black dolman, with green collar, is trimmed with yellow braiding, yellow piping, and dark red trousers, the officers having a yellow stripe down theirs.

The other squadrons have a sky blue shako with red plume. The tunic in full dress, the jacket in undress, is sky blue with white buttons, collar and piping dark blue, and dark red trousers, down which the officers wear a blue stripe.

The Servian artillery comprises:—

A horse battery, attached to the cavalry division;

Some field batteries;

Some mountain batteries;

A regiment of foot artillery, and a company of mechanics and artificers

The field and mountain batteries are grouped in five regiments. Each regiment consists of 3 groups of batteries of 3 batteries each. The mountain artillery is formed into two groups. Each of the two first regiments includes one of these groups and, on the other hand, has only two groups of field artillery.

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The batteries have only 4 guns on a peace footing, 6 on a war. In case of mobilisation there is formed, by regiment, a supplementary so-called *dépôt* battery.

The foot artillery is formed of 2 battalions of 4 companies each, and a train company. The artillery wears a uniform recalling that of the infantry. The jacket of the same colour is distinguished by black collar and cuffs, and the trousers are grey. The plume of the shako is red and black. The collars and cuffs of the officers are of velvet.

The technical troops include:—

7 Companies of Pioneers;

1 Railway Company;

1 Telegraph Company;

1 Company of Sapper-Miners.

On mobilisation these troops are doubled by the Militia. The uniform of the engineers is dark green, with collar, piping and plume of garnet red.

One of the peculiarities of the grades in the Servian Army is that of colour-bearer, an intermediary between an officer and non-commissioned officer. The colour-bearer is chosen by the officers, lives with them, and can become a sub-lieutenant. There is only one rank among the generals.

With the exception of the rank of lieutenant, which comes by seniority, all the others are, without exception, by selection.

The above are the general characteristics of the Servian Army.

—*Armée et Marine.*

## NAVAL AND MILITARY CALENDAR.

MARCH, 1909.

- 3rd (W.) H.M.S. *Aboukir* arrived at Plymouth from the Mediterranean.
- 4th (Th.) Secretary for War made his Annual Statement on the Army in the Commons.
- 5th (F.) H.M.S. *Fantome* recommissioned at Sydney.
- 8th (M.) H.M.S. *Aboukir* paid off at Devonport.
- 8th (M.) H.M.S. *Donegal* " " "
- 9th (T.) H.M.S. *Aboukir* recommissioned at Devonport.
- 9th (T.) H.M.S. *Donegal* " " "
- 11th (Th.) H.M.S. *Aboukir* left Devonport for Mediterranean.
- 17th (W.) Successful transportation of 1,000 Guards, with impedimenta, to Hastings and back on motor cars lent by members of Automobile Association, to repel imaginary invader.
- 20th (Sat.) Launch of H.M.S. *Bellona* at Pembroke.
- 20th (Sat.) Launch of H.M. Destroyer *Crusader* at Cowes.
- 20th (Sat.) Launch of first-class armoured Cruiser *Von der Tann*, from the Blohm and Voss Yard, Hamburg, for German Navy.
- 23rd (T.) H.M.S. *Dreadnought* paid off at Portsmouth.
- 24th (W.) " " recommissioned "
- 28th (F.) H.M.S. *King Edward VII.* paid off at Portsmouth.
- 27th (Sat.) " " recommissioned "
- 31st (W.) H.M.S. *Cochrane* paid off at Portsmouth.

## FOREIGN PERIODICALS

### NAVAL.

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*Kavalleristische Monatshefte*. Vienna: March, 1909.—"Raids." "Seydlitz." "The Graf Stadion-Cuirassiers in the Cavalry Action at Stresetic." "French Views on the Training and Employment of Cavalry in the Light of the Two Years' Service." "Deux Mots, s'il vous plait." "The French Account of the Zeppelin Patrol Ride (July, 1870)." "A Bold Coup de Main of Lieutenant von Hellwig of the Hussars (17th October, 1806)." "The Breaking in of an Untrained Horse." "Some Words on Scouting Service." "Shooting in the Russian Cavalry." "The Buda-Pesth—Vienna, Long-Distance Ride, 1908." "A Contribution to the Question of Improvement in the Shoeing of Horses in the K.u.K. Army." "The Report of the Director-General of the English Veterinary Department." "The Spahis: Criticism of a Spanish Officer." "Tactical Problems for the Cavalry Officer."

BELGIUM.—*Bulletin de la Presse et de la Bibliographie Militaires*. Brussels: 15th February, 1909.—"Field Service Regulations for the German Army of 22nd March, 1908" (continued). "The Modern Military Instructor" (continued). "Defence and Attack of Fortified Field



Positions" (continued). 28th February.—"Defence and Attack of Fortified Field Positions" (concluded). "Field Service Regulations for the German Army of 22nd March, 1908" (concluded). "Organisation of the English Regular Army, of the Special Reserve, and the Territorial Troops."

FRANCE.—*Journal des Sciences Militaires*. Paris: 1st March, 1909.—"The 3-Gun Battery and the Artillery of the Advanced Guard." "Reserve Officers" (continued). "Some Ideas on the Instruction of a Regiment of Infantry" (continued). "Letter on the Campaign of the Upper Guir (August-September, 1908)." 15th March.—"The Command of the Troops." "Grand Defilades of the Artillery; The Field Periscope." "The 3-Gun Battery and the Artillery of the Advanced Guard" (continued). "Reserve Officers" (continued). "Considerations on the Russo-Japanese War" (concluded).

*La Revue d'Infanterie*. Paris: March, 1909.—Has not yet been received.

*Revue de Cavalerie*. Paris: February, 1909.—"General Goalin de Bourgogne." "School of Brigade, Division, Squadron" (concluded). "Our Cavalry in the Next War (by General von Bernhardt)" (continued). "Letters of a Dragon to MM. the Members of the Army Commission" (concluded). "Souvenirs of a Captain of Cavalry (1851-1881)" (continued).

*Revue d'Artillerie*. Paris: January, 1909.—"How we have Conquered the Air." "Reorganisation of the Artillery."

*Revue Militaire Générale*. Paris: February, 1909.—"Strategical Studies." "Fire and Movements." "On the Subject of the Constitution of the Dépôts." "Counter Attack or Return Stroke?" "Is the Employment of Cyclist Battalions in the Field really Possible?" "Study on the Events of the 16th August, 1870."

*Le Spectateur Militaire*. Paris: 1st March, 1909.—"Service or Servitude?" "Some Social Characteristics of the Influence of Napoleon I." (continued). "Nourishment of the Horse." "Tactical Lessons Arising from the Russo-Japanese War" (continued). 15th March.—"The Accountant Officers of the Army." "Service or Servitude?" (continued). "Some Social Characteristics of the Influence of Napoleon I." (concluded). "Tactical Lessons Arising from the Russo-Japanese War" (continued).

*Revue d'Histoire*. Paris: March, 1909.—"Moral State of the Armies of the Rhine and Moselle in the Year 1794." "The Armies of the Rhine at the Commencement of the Directory (Sambre-et-Meuse, Rhine-et-Moselle)" (continued). "The Battle of Messkirch (5th May, 1800)" (concluded). "The Services at the Rear of the Grand Army, 1806-1807" (continued). "The War of 1870-71: The Investment of Paris."

*Revue Militaire des Armées Etrangères*. Paris: March, 1909.—"The Russo-Japanese War" (continued). "The Imperial German Manœuvres in 1908" (concluded). "The Austro-Italian Frontier and the Adriatic" (continued). "Exercises and Manœuvres of the Italian Army in 1908."

GERMANY.—*Artilleristische Monatshefte*. Berlin: March, 1909.—"The Centenary of the Establishment of the Artillery Experimental Commis-

sion." "Mechanical Time Fuzes" (concluded). "The Preparative for Opening Fire by Field Artillery." "Remarks on the Krupp Independent Sighting Lines." "More of the Krupp Automatic-Loading Guns."

*Jahrbücher für die Deutsche Armee und Marine.* Berlin: March, 1909.—"Training for War" (continued). "The Organisation of the German and French Field Artillery." "The Lessons from the South African and Russo-Japanese Wars in the Employment and Best Use of Field Artillery." "Economies." "Custoza, 1848 and 1866" (concluded).

*Internationale Revue über die Gesamten Armeen und Flotten.* Dresden: March, 1909.—"Military and Naval Intelligence from Belgium, Brazil, China, Germany, France, Great Britain, Holland, Italy and Japan." *Supplement No. 105.*—"Australia's Land Defence." *French Supplement No. 120.*—"Military Transports on the Euphrates." "The New Submersibles Constructed at the Germania Yard." "Dismounted Fighting of Cavalry." "The Importance of Aeroplanes from the Military Point of View." "An English Criticism of German Submarines."

*Militär-Wochenblatt.* Berlin: 2nd March, 1909.—"Fire Superiority." "Cavalry Encounters." "On the Training of Troops." "News from the German Army" (concluded). 4th March.—"The Centenary of the Prussian Ministry of War." "Napoleon I.'s Means of Communication." "News from the Austro-Hungarian Army and Navy." 6th March.—"News from the French Army." "Napoleon I.'s Means of Communication" (concluded). "Marshal Canrobert." "News from the Austro-Hungarian Army and Navy" (continued). 9th March.—"Military Association of Berlin (Announcements)." "Observations on the French Expedition in Morocco," No. 2. "The Italian Field Artillery and the *Casus Belli*." "News from the Austro-Hungarian Army and Navy" (concluded). 11th March.—"The Overshooting of Infantry by Infantry." "The Technique of a Rear-guard Action by Field Artillery." "On the Distribution of Fire." "About the Russian Army." 13th March.—"The Prussian Ministry of War, 1809." "The Berlin Military Association (Lecture)." "The Overshooting of Infantry by Infantry" (concluded). "About the Russian Army," (No. 2). "Increase of Officers' Pay Approved by the Duma." 16th March.—"The Centenary of the 1st Nassau Infantry Regiment No. 87." "The Centenary of the Prussian Artillery Experimental Commission." "The Cavalry Practice Ride in Turkey." "The Foreign Legion." 18th March.—"The Importance of the Wood of Marchenoir in the Field of Operations, 1870." "A Russian Study of General Falkenhäusen's Book ("The Great War of Our Day"). "Indirect Fire by Field Artillery." "The Attacking Strength of Close and Loose Firing Lines." 20th March.—"Observations on Army Leading." "The Venetian Strategic Railways." "The Gun Question in South-West Africa." "The English Service Rifle." 23rd March.—"Two Hundred and Fifty Years Ago." "Sweden's Advance under Lieut.-General Würtz into the Duchy of Prussia, March, 1659." "Observations on Army Leading" (continued). "Something More on the Training of Troops." 25th March.—"More on the Tactical Use of Searchlights." "Two Hundred and Fifty Years Ago." "The Article, "Changes of Formation," Explained by an Example." 27th March.—"On the British Army." "More on the Tactical Use of Searchlights" (concluded). 30th

March.—"Field and Foot Artillery in Their Common Battle Efficiency."  
"Military Discipline." "On the British Army" (concluded).

ITALY.—*Rivista di Artiglieria e Genio*. Rome: December, 1908.—  
"The Piedmontese Fortress Artillery from 1850 to 1860" (concluded).  
"Practical Calculations of Conducting Water in Cast Iron Pipes."  
"Photo-Topographical Relief of a Reach of the Course of the Tiber."  
"Some Consideration on the Organisation of the Italian Field Artillery."  
"Names and Definitions." "4 or 6 Gun Batteries?"

SPAIN.—*Revista Técnica de Infantería y Caballería*. Madrid: 1st  
March, 1909.—"A Treatise on the Militia." "Field Range-Finder"  
(continued). "The New Tactics." "Method and Hours' Table for the  
Instruction of Japanese Recruits." "Report on the Musketry Course by  
Infantry First Lieutenants at the Central Musketry School in 1907" (con-  
tinued). "Intervention of the Tactical Reserves in the Attack." 15th  
March.—"Something about Lieutenant Ruiz Mendoza." "Examination  
of the French Frontier." "The New Tactics" (continued). "Lessons  
from Our Enemies." "Report on the Musketry Course, by Infantry First  
Lieutenants at the Central Musketry School in 1907" (continued). "A  
Landing in England."

*Revista Científico-Militar y Biblioteca Militar*. Barcelona: 10th  
March, 1909.—"Dirigibles and Automobiles." "The Art of Command."  
"The Question of Field Artillery." "Employment of the Field Telephone  
in the British Army." "Automobiles in the German Army." 25th March.  
—"Evolution of the Modern Tactical Methods of Infantry and Cavalry."  
"Necessary Reforms in Military Promotions." "The Command and The  
Initiative." "Strategical Unity Preferable."

SWITZERLAND.—*Revue Militaire Suisse*. Lausanne: March, 1909.—  
"Is the Adoption of a New Infantry Cartridge Necessary?" "Krupp  
Guns" (concluded). "Some Notes on Infantry Firing Programmes."  
"Some Injuries from Saddlery of Army Horses." "The Company under  
Artillery Fire." "Cavalry and Reorganisation."

UNITED STATES.—*Journal of the United States Artillery*. Fort Monroe,  
Virginia: January and February, 1909.—"An Ex-Confederate's Views on  
National Defence." "Some Suggestions for Artillery Drill." "Sea Coast  
Artillery Practice." "The Scientific Basis of the New Lewis Depression  
Position Finder." "Experiments to Determine the Sensitiveness of a  
Certain Service Percussion Tube."

*Journal of the U.S. Infantry Association*. Washington: January,  
1909.—"The School of Musketry." "Instruction of Officers in the Art of  
War." "The Provisional Machine Gun Company." "Some Signals for  
Scouts." "The Sanitary Responsibility of the Line Officer." "A Recoil  
Plate for Use with the Maxim Automatic Machine Gun." "Federal  
Relations of the Organised Militia."

*Journal of the U.S. Cavalry Association*. Fort Leavenworth, Kansas:  
January, 1909.—"Suggested Changes in Cavalry Drill Regulations."

"Portable Machine Guns." "Horsebreeding in Foreign Countries: Remounts." "Machine Gun Organisation." "Uniformity in the Troops." "Notes on a Trip through India." "The Army in India."

*Journal of the Military Service Institution.* Governor's Island, New York: January and February, 1909.—"The Medical Department of the U.S. Army." "The Mountain Troops of Europe." "Utilisation of the Night." "Art in the Army—A Forecast." "American Pioneer in Military Education." "Physical Training of Officers on the Active List." "Volunteer Cavalry in the South." "Post Professional Libraries." "Types and Traditions of the Old Army."

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## NOTICES OF BOOKS

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*The County Lieutenancies and the Army.* By the Hon. J. W. FORTESCUE.  
London: Macmillan & Co., 1909.

The British Army already owes a very great debt to Mr. Fortescue for the noble record of its history which he has compiled, and is still compiling, and in this, which he describes modestly as an "overflow" volume, he has laid civilian readers also under an obligation, in that he brings before us a study of burning questions of to-day as they appeared to and were pondered over and muddled through by soldiers and politicians just one hundred years ago. Our thanks are also due in a lesser degree to the Secretary of State for War, who, recognising the importance of the subject at the present time, was able to persuade the author to expand into this volume matter which, included in his "History of the British Army," must of necessity have been packed into no more than twenty or thirty pages. The research required for a book of this kind has been enormous—Mr. Fortescue tells us in his preface that its compilation has obliged him to consult no less than one hundred thousand manuscript authorities, while his labours have been increased by the imperfect and careless manner in which public correspondence was kept in the Public Offices at the beginning of the last century. Mr. Fortescue fears that the difficulty he has experienced in the discovery and the putting together of information may have had an unfortunate influence upon the manner of its presentment; we can assure him that he need be under no such apprehension. Facts are stated and figures are here arrayed in a way that both invites and retains the interest of the reader, while in the very details which Mr. Fortescue turns aside to record, we seem to find just the touches which charm and attract those who would study a question which, through so many troublous years, has occupied the attention of soldiers of all schools and statesmen of every party.

None who read this book can fail to be struck by the recurrence of the same fatuous military policy; the reduction of the Army so soon as peace was declared; the hasty and ill-considered steps for the improvising of an army on the threat of war; the attitude of inert defence; the failure

to profit by the unpreparedness of the enemy; the starving of the Regular Army and the wasted energies displayed in the creation of an enormous defensive force to be available only at home and in the event of an invasion which never came. Mr. Fortescue describes the alternate measures and expedients of Pitt, of Addington, of Windham, of Castlereagh—considered by the author as “the ablest man that ever controlled the War Office”—and of Liverpool, and draws an interesting parallel between the scheme supported by Castlereagh in 1809, and that devised by a Liberal Administration just a century later. Many considerations emerge from the study of a book such as this, and each might in turn form the subject for an exhaustive review; but, perhaps, the following may be noted: that while we found an increasing difficulty in maintaining our Regular Army during a protracted war, we were paying something like a million foreign troops to fight for themselves and for us; that our Regular Forces were largely reinforced from a Militia compulsorily recruited; and that the views of Windham and of Castlereagh are largely those of soldiers and politicians of the present day—that compulsion cannot be applied for service overseas; that the ultimate end for which all our military organisation must exist is the maintenance of our only offensive land force, the Regular Army; that the true basis for such an organisation is national training; and that learning the use of arms should be imposed as a positive duty upon all individuals within certain ages.

As a detailed record of all the desperate measures which in turn and out of season were taken to fill and keep filled the ranks of the Regular Army during a bloody and protracted war, Mr. Fortescue's latest book is commended to all soldiers, who will, however, probably lay it down with a feeling of wonder whether these measures would have sufficed had the war continued much longer, and of assurance that then, at any rate, the intricate problem of recruiting the British Army had not been finally solved.

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*Military Needs and Military Policy.* By the Right Hon. H. O. ARNOLD-FORSTER, M.P. London: Smith, Elder & Co., 1909.

A melancholy interest attaches to this book, which was published only two days before the sudden and lamented death of its author. It is, for the most part founded upon a series of articles contributed during last autumn to the *Standard* by Mr. Arnold-Forster, but a good deal of new matter would seem to have been added, while the original treatment has received a considerably wider scope. It was, perhaps, inevitable that it should contain a very great deal of what is in the highest degree controversial, for not only did Mr. Arnold-Forster totally disagree upon many points with his successor at the War Office, but he saw much of his policy reversed. and, indeed, the views of the two men were so absolutely divergent that agreement was hardly possible upon any single point of army policy. The book—the last of many which the late Mr. Arnold-Forster wrote upon a subject to which he had given more thought and attention than the majority of civilians—is, in a measure, both an explanation and an indictment; it gives us the views of the author—of one who, at an eventful time, and at a period when our Army had emerged not altogether unscathed



from a serious campaign, succeeded to the office of Secretary of State for War—on the military needs of the country; and endeavours to show that the Territorial Force, as constituted, can never supply those needs. But the writer attempts more than this, for he draws attention, in no uncertain terms, to numerous cases wherein, as it appeared to him, the public has been misled in regard to important military questions by incorrect statements made in Parliament, and by what Mr. Arnold-Forster describes as the varying opinions of military advisers, while he suggests that support for the present system has been largely obtained by misrepresentations obscuring the truth and creating a false sense of security.

Mr. Haldane has attempted to form our Home forces into two lines—his predecessor in office stood out for the retention of three; he was a strong advocate for a well-trained Regular Army, and holding, as he did, the opinion that no man could be counted to be an efficient soldier who had not undergone at least two years of continuous training under his own officers in an organised unit, it was natural that he strongly disapproved of the transformation of the Militia into the Special Reserve, and considered that, equally with the Volunteers, are the Territorials unfit to cope with either an invasion or a raid.

The most powerful chapters in this book are those wherein Mr. Arnold-Forster reminds us of the apparent disagreement between the policy of the Admiralty and that of the War Office. In agreeing to the dismantling of our coast defences, the War Office, it is claimed by the author, have accepted the Admiralty view that invasion is impossible, while the War Office is so certain there will be a landing that four millions a year are being spent—"not to prevent it, but to neutralise its effect after it has taken place." Mr. Arnold-Forster, as may be seen from his book, was an adherent of the extreme Blue Water School; he did not believe in the possibility of invasion; he was no advocate for compulsory military service; he disagreed in many points with Lord Roberts, who contributes a weighty introduction to this book; but the two men, the soldier and the civilian, the Field-Marshal and the ex-Minister of War, were in complete agreement on the points whereon Lord Roberts touches in his few words of introduction. For the rest, men may agree or not with the views which Mr. Arnold-Forster put forward with his latest breath, but if those who read the book are thereby led to think seriously about our complex military problem, and will not be content merely to believe that to be true which they wish to be true, it is very certain that the object with which this volume was written will have in a large measure been attained.

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#### PRINCIPAL ADDITIONS TO LIBRARY DURING MARCH, 1909

1904. *The Russo-Japanese War*. By Captain F. R. SEDGWICK. 8vo. 5s. (Presented.) (Swan, Sonnenschein & Co., Ltd.) London, 1909.

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*A Practical Arabic Grammar. Part II.* By Colonel A. O. GREEN. 4th Edition. 8vo. (Presented.) (Clarendon Press.) Oxford, 1909.

*Mountings of the Naval Guns and their subsequent Use with the Ladysmith Relief Column.* By Captain PERCY SCOTT, R.N., and Captain A. H. LIMPUS, R.N. (Lecture delivered at Hong Kong, 13th June, 1900.) 8vo. (Presented.) (Hong Kong Daily Press.) Hong Kong, 1900.

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*The British Tar in Fact and Fiction.* By Commander C. N. ROBINSON, R.N. 8vo. 15s. (Presented.) (Harper & Brothers.) London, 1909.

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*Military Needs and Military Policy.* By the Right Hon. H. O. ARNOLD-FORSTER. 8vo. 3s. 6d. (Presented.) (Smith, Elder & Co.) London, 1909.

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*Die Heutige Feldartillerie.* By Captain ROSKOTEN. 2 Vols. 8vo. 10s. (Presented.) (R. Eisenschmidt.) Berlin, 1908.

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*The Frontiersman's Pocket Book.* By R. POCOCK. Compiled and Edited by R. P. on behalf of the Council of Legion of Frontiersmen. 12mo. 5s. (John Murray.) London, 1909.

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*Eighty Years' Reminiscences.* By Colonel J. ANSTUTHER THOMSON. 8vo. (Presented.) (Longmans, Green & Co.) London, 1904.

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*Le Grand Etat-Major Naval.* By le Lieutenant de Vaisseau CASTEX. 8vo. 2s. 8d. (H. Charles-Lavauzelle.) Paris, 1908.

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*Enseignements tactiques découlant de la Guerre Russo-Japonaise.* By le Commandant NIESSEL. 8vo. 2s. (H. Charles-Lavauzelle.) Paris, 1909.

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*L'Infanterie au Combat.* By le Lieut.-Colonel T. DE COLLIGNY. 8vo. 3s. (H. Charles-Lavauzelle.) Paris, 1908.

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*Samuel Pepys, Administrator, Observer, Gossip.* By E. HALLAM MOORHOUSE. 8vo. 10s. 6d. (Chapman & Hall.) London, 1909.

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*Modern Germany.* By J. ELLIS BARKER. 8vo. 10s. 6d. (Smith, Elder & Co.) London, 1909.

*The Life of Frederick the Great.* By THOMAS CARLYLE. Abridged and Edited by EDGAR SANDERSON. 8vo. 5s. (Hutchinson & Co.) London, 1909.

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*Napoleon's Marshals.* By R. P. DUNN-PATTISON. 8vo. 12s. 6d. (Methuen & Co.) London, 1909.

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*The Frontiers of Baluchistan.* By G. P. TATE. 8vo. 12s. 6d. (Presented.) (Witherby & Co.) London, 1909.

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*Catechism on Field Training.* By Lieut.-Colonel W. FLOWER. 4th Edition. Crown 8vo. 3s. (Presented.) (Gale & Polden, Ltd.) Aldershot, 1909.

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*A Vindication of Warren Hastings.* By G. W. HASTINGS. 8vo. 6s. (Presented.) (Henry Froude.) London, 1909.

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**The Journal**  
OF THE  
**Royal United Service Institution.**

VOL. LII. 1908-1909.

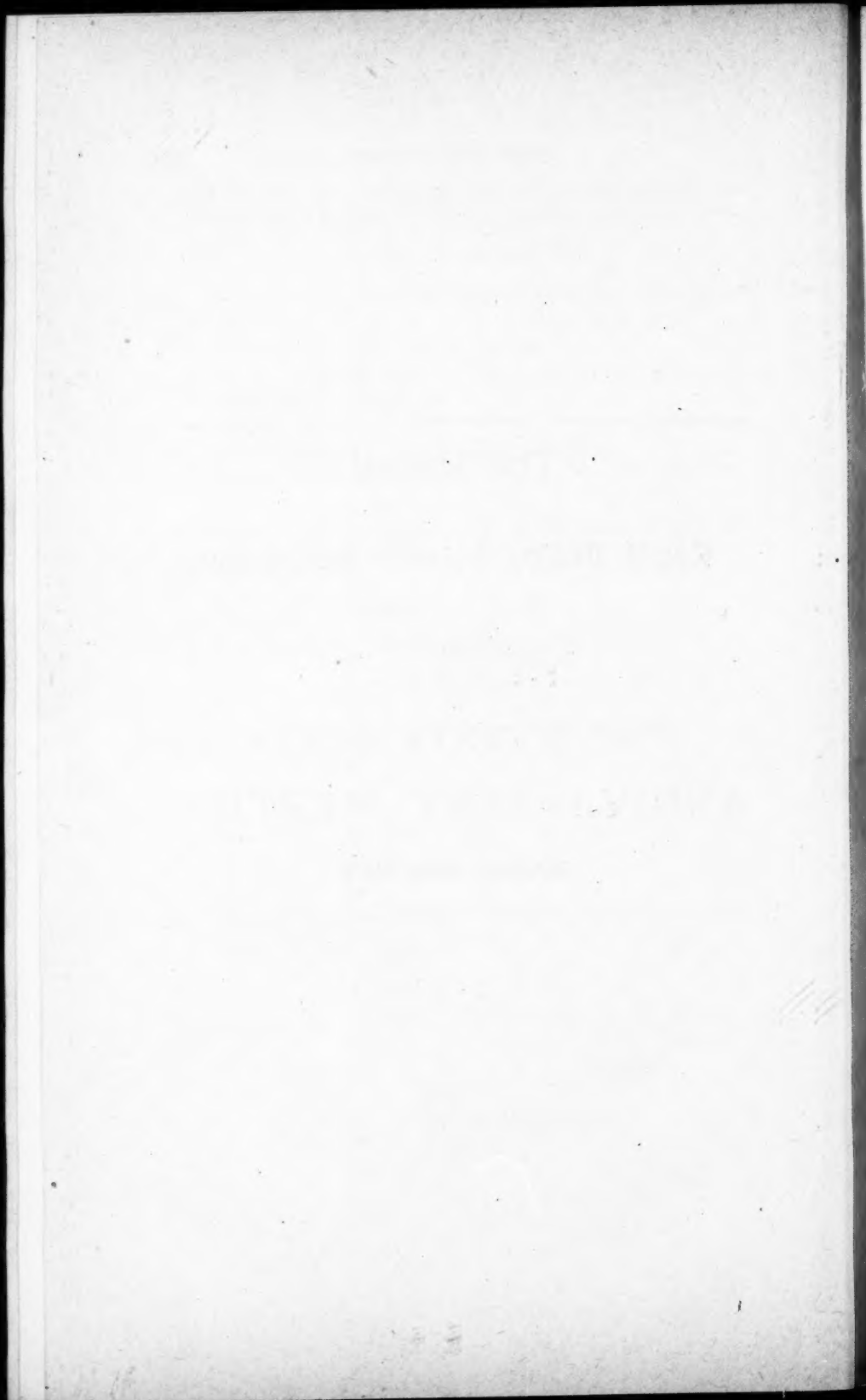
APPENDIX.

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THE SEVENTY-EIGHTH  
ANNIVERSARY MEETING

**MARCH 2nd, 1909.**

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# Royal United Service Institution.

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THE SEVENTY-EIGHTH ANNIVERSARY MEETING WAS HELD AT  
THE ROYAL UNITED SERVICE INSTITUTION, WHITEHALL,  
S.W., ON TUESDAY, MARCH 2ND, 1909, ADMIRAL  
OF THE FLEET, THE LORD WALTER KERR, G.C.B.  
(CHAIRMAN OF THE COUNCIL) PRESIDING.

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The CHAIRMAN: I will ask the Secretary to read the Notice convening the Meeting.

The SECRETARY read the Notice.

## ANNUAL REPORT.

"The Council has the honour to submit its Report for the year 1908.

### ROYAL VISITS.

During the year the Museum was visited by Her Majesty the Queen, Her Imperial Majesty the Empress Marie Feodorovna of Russia, Their Royal Highnesses the Prince and Princess of Wales and the Princess Victoria.

### COUNCIL.

The Council has to deplore the death of Lieut.-Colonel T. H. Baylis, V.D., K.C., a Vice-President of the Institution, who joined in the year 1863, became a Member of the Council in 1886, and a Vice-President in 1892.

Colonel the Right Honourable Sir J. H. A. Macdonald, K.C.B., V.D. (Lord Kingsburgh), late of the Queen's Edinburgh Rifle Volunteer Brigade, Honorary Colonel Army Motor Reserve, and an Ensign in the King's Body Guard for Scotland, has been appointed one of the six Vice-Presidents, in consideration of his valuable services both to the Institution and to the Territorial and Volunteer Forces.

## MEMBERS.

The Council has pleasure in reporting that during the past year 250 Officers joined the Institution. There were 130 withdrawals and 108 deaths, of the latter 32 were Life Members. The total Number of Members on December 31st was 5,420, being an increase on the previous year of 12 Members.

The details of Officers joining were as follows :—

Regular Army	-	-	-	-	-	-	180
Royal Navy	-	-	-	-	-	-	30
Territorial Army and Volunteers	-	-	-	-	-	-	17
Special Reserve and Militia	-	-	-	-	-	-	11
Yeomanry	-	-	-	-	-	-	5
R.N.R. and R.N.V.R.	-	-	-	-	-	-	4
Royal Marines	-	-	-	-	-	-	3
							<hr/> 250

## FINANCE.

The Revenue Account for the year shows a Debit Balance of £805 19s. 3d., due to the necessity for the installation of a new Boiler and for repairs to the Heating Apparatus, to the Painting of the Museum, to increased expenditure on the Journal, to the provision of New Museum Cases, and to the erection of new shelving in the Main and Outer Libraries, and to higher rates, none of which were considered to be suitable for capital charges.

The Council does not anticipate the recurrence, during the present year, of any extraordinary expenditure other than that required for the printing of the Library Catalogue. The Council moreover intends to make at an early date an appeal to Members inviting them to introduce one new Member each during the current year. The result of this appeal if responded to by each Member, would very substantially augment the income of the Institution.

## MUSEUM.

Many valuable additions have been made to the collection, all of which have been duly recorded in the Journal. Amongst the more conspicuous contributions were two handsome gifts on the part of Mr. W. W. Astor, one being the Field-Trumpet used by Trumpet-Major Joy to sound the charge at Balaclava, the other the Flag of the U. S. Frigate *Chesapeake*, taken by H.M.S. *Shannon*, on 1st June, 1813.

The number of persons who passed through the turnstile amounted to 29,829, not including a very considerable number of visitors who were introduced by Members personally.

The Council is pleased to report that the privilege of free admission has been extended to many poor schools, who have visited the Museum in large numbers during the year.

The whole of the second edition of the Catalogue has been exhausted, and a third edition of ten thousand is now being issued. Owing to the proportions which this Catalogue has assumed, the Council has found it impossible to sell the book at 6d. per copy without incurring considerable loss; the price has consequently been increased to 1s.

"ROYAL UNITED SERVICE INSTITUTION GOLD MEDAL AND  
TRENCH-GASCOIGNE PRIZES."

The subject of the Naval Essay for the Gold Medal and Trench-Gascoigne Prizes is:—

"The Command of the Sea: What is it?"

The names of the Referees are:

Admiral of the Fleet Sir A. K. Wilson, V.C., G.C.B., G.C.V.O.

Vice-Admiral Sir Charles Campbell, K.C.M.G., C.B., D.S.O.

Rear-Admiral E. E. Bradford, C.V.O.

Their decision will be made known at the Anniversary Meeting.

MEMBERS OF THE COUNCIL.

The following Members retire from the Council, having completed three years' service:—

*Regular Army.*

Colonel C. G. Donald, C.B.

Colonel L. A. Hale.

Colonel Hon. O. V. G. A. Lumley.

*Special Reserve and Militia.*

Colonel W. A. Hill, C.B.

*Territorial Force (Mounted Branch).*

Colonel R. B. Colvin, C.B.

*Territorial Force.*

Colonel T. S. Cave.

Colonel W. C. Horsley.

*Royal Naval Reserve.*

Commander W. F. Caborne, C.B.

The following are the names of the Candidates nominated for the vacancies on the Council :—

*Regular Army (3 Vacancies).*

Colonel C. G. Donald, C.B., half-pay, late Royal Fusiliers.

Colonel L. A. Hale, late R. E.

Lieut-General Sir E. T. H. Hutton, K.C.M.G., C.B.

Colonel Hon. O. V. G. A. Lumley, half-pay, late 11th Hussars,  
Commanding 1st South Midland Mounted Brigade,  
Territorial Force.

Brigadier-General Sir H. S. Rawlinson, Bart., C.V.O., C.B.,  
Commanding 2nd Infantry Brigade.

*Special Reserve and late Militia (1 Vacancy).*

Col. W. A. Hill, C.B., late 3 Bn. the Gloucestershire Regiment.

*Territorial Force (Mounted Branch) (1 Vacancy).*

Colonel R. B. Colvin, C.B., Essex Yeomanry.

*Territorial Force (2 Vacancies).*

Colonel the Lord Bingham, 5th Bn. London Regiment (London  
Rifle Brigade).

Colonel T. S. Cave, Commanding South Midland Brigade,  
Territorial Force.

Colonel J. W. Greig, 14th Bn. London Regiment (London  
Scottish).

Colonel H. C. C. D. Simpson, C.M.G., late R. A., Commanding  
Territorial Artillery, Western Command.

*R.N.R. (1 Vacancy).*

Commander W. F. Caborne, C.B.

## THE JOURNAL.

The Journal has fully maintained its high position as a Service periodical.

Papers on the following subjects were read and discussed, and the majority have appeared in the Journal. To the authors are due the best thanks of the Institution.

*Captain C. W. Battine, late 15th Hussars.* "The Use of the Horse Soldier in the XXth Century."

*The Rev. Canon Edgar Sheppard, C.V.O., D.D.* "Whitehall Palace and the Execution of King Charles I." (Part I.)

*Brigadier-General Sir H. S. Rawlinson, Bart., C.V.O., C.B.* "Night Operations."

*Colonel F. N. Maude, C.B.* "The Development of Napoleonic Strategical and Tactical Methods, as Illustrated by the Battle of Waterloo."

*Vice-Admiral Sir C. Campbell, K.C.M.G., C.B., D.S.O.* "The Training, Organisation, and Rapid Concentration of a Force to Resist Raids or Invasions by the Strategical Use of the Mono-Rail."

*The Rev. T. C. Lawrence, M.A., LL.D.* "The Hague Conference and Naval War."

*Lieutenant J. W. Lewis, West Kent Imperial Yeomanry.* "The Norwegian Military System."

*Brigadier-General H. H. Wilson, D.S.O.* "Staff Tours."

*Colonel F. D. V. Wing, C.B., R.F.A.* "The Distribution and Supply of Ammunition on the Battle-field."

*Sir R. Giffen, K.C.B., LL.D.* "The Necessity of a War-Chest in this Country, or a greatly increased Gold Reserve."

*Lieut.-General R. S. S. Baden-Powell, C.B.* "Training of the Territorial Force."

*Lieutenant A. C. Dewar, R.N.* "Battle Tactics of the Single Line."

*Colonel H. E. Rawson, C.B., R.E.* "A New Principle in Weather Forecasting and its Importance in Naval and Military Operations."

*Captain A. H. Trapmann, 25th (Cyclists) Bn. London Regiment.* "The Cycle in Warfare: its Potency as a Strategical and Tactical Factor."

Two Discussions without Papers:—

1. "The National Horse Supply and our Military Requirements."
2. "The Standard of Naval Strength."

The thanks of the Institution are also due to the following Officers for Papers and Translations from Foreign Journals contributed by them: *Papers* by Major John H. Leslie, R.A.; Captain T. Ormsby; Major J. A. Tulloch, R.E.; Lieut.-General F. H. Tyrrell (late Indian Army); Colonel F. G. Stone, R.A.; Brigadier-



General R. F. Johnson, R.A.; Captain B. E. Sargeant; Major K. K. Knapp, R.G.A.; Fleet-Surgeon C. M. Beadnell, R.N.; Lieut.-General Sir E. H. Collen, G.C.I.E., C.B.; Major J. M. Home, 2nd K.E.O. Gurkha Rifles; and one anonymous contributor. *Translations from Foreign Works*: Lieut.-Colonel E. Gunter; Major E. Makins, D.S.O., 1st Royal Dragoons; and five anonymous contributions. Four Translations were further communicated by the General Staff, and three by the Director of Naval Intelligence.

The Institution is indebted to the Lords Commissioners of the Admiralty, to the Army Council, the Secretaries of State for the Colonies and for India, and to the Civil Service Commissioners, for copies of various works issued by their respective Departments, and to the Speaker of the House of Commons for Parliamentary papers.

The exchange of Journals with Foreign Governments, and with many Scientific Societies in this and other countries, has been continued.

#### LIBRARY.

The number of books added to the Library during the year was 240, bringing the total number of volumes in the Library up to 29,667.

The number of Members subscribing to the Lending Library has increased from 252 to 277.

Donations of books and maps have been received from the Governments of Austria, Belgium, Denmark, France, Germany, Italy, the Netherlands, Russia, Spain, Sweden, Switzerland, and the United States. The thanks of the Council has been conveyed to the several Governments for these donations.

During the year many of the books of small significance have been eliminated from the main Library, and accommodation has been afforded to them by the erection of shelving in two of the Rooms at the North End of the Museum. During the process of elimination there were found to be many duplicate works, and many of these were disposed of, together with some other books possessing no naval or military character.

The Council has decided to separate the duties of Editor and Librarian hitherto combined in one office. Captain H. Garbett, R.N., the former Editor and Librarian, has been appointed Editor, and Major C. H. Wylly, the former Assistant Editor and Assistant Librarian, has been appointed Librarian.

A. LEETHAM, Lieut.-Colonel,  
Secretary.

Whitehall,  
February, 1909."

## TABULAR ANALYSIS OF THE STATE OF THE INSTITUTION.

[A full analysis for each year from 1831 will be found in the Report for 1897.]

Year. 1st Jan. to 31st Dec.	Annual Subs. received.	En- trance Fees.	Receipts (from all sources).	Life Subs. re- ceived.	Amount of Stock.	Invested in the pur- chase of Books, &c.	No. of Vols. in Library.	No. of Members on the 31st Dec.
	£	£	£	£	£	£		
1831	654	..	654	1,194	..	..	..	1,437
1841	1,450	..	1,643	186	6,000	243	5,850	4,243
1851	1,136	131	1,292	66	666	34	10,150	3,188
1861	2,122	305	2,899	266	2,846	99	11,812	3,689
1871	2,455	237	3,677	538	7,748	202	15,501	3,922
1881	2,893	238	4,967	645	13,670	240	19,920	4,377
1891	2,640	189	5,004	454	21,942	153	23,845	4,204
1892	2,930	605	9,429	1,572	24,805	142	24,099	4,657
1893	2,929	468	8,334	1,095	22,172	157	24,471	4,961
1894	3,598	215	6,625	606	12,840	200	24,680	5,016
1895	3,760	353	7,117	921	8,761	204	25,947	5,198
1896	3,802	351	7,225	876	8,761	245	26,161	5,347
1897	3,910	401	10,902†	959	12,386	381	26,381	5,550
1898	3,964	265	6,935	493	12,386	376	26,592	5,620
1899	3,834	167	6,646	251	12,841	430	27,142	5,583
1900	3,879	174	7,170*	235	13,791	264	27,492	5,491
1901	3,816	197	6,955	358	14,192	289	27,792	5,443
1902	3,806	188	7,063	449	14,491	309	28,167	5,427
1903	3,743	178	6,597	409	15,459	299	28,387	5,361
1904	3,684	184	6,707	448	15,459	301	28,636	5,313
1905	3,713	253	7,756	611	15,459	324	28,851	5,369
1906	3,714	226	6,803	519	16,488	204	29,114	5,404
1907	3,733	211	6,615	573	16,549	256	29,427	5,408
1908	3,741	220	7,205	502	16,612	213	29,667	5,420

† A donation of stock valued at £2,323, and £1,301 realised by the letting of seats to view Her Majesty's Diamond Jubilee Procession, are included in this amount.

\* This amount includes a donation of £500.

DR. REVENUE ACCOUNT FOR THE YEAR ENDING 31<sup>ST</sup> DECEMBER, 1908. OK.

1907.		1908.	
£	s. d.	£	s. d.
To Sale of Journal .....	268 13 4	241 12 1	...
" Advertisements in Journal .....	188 0 3	169 3 4	...
Lending Library .....	112 7 0	410 15 5	...
Sale of Books .....	...	134 10 6	...
Admissions to Museum .....	37 8 6	60 0 0	184 10 6
Sale of Museum Pamphlets .....	...	631 8 9	...
Sale of Museum Catalogues .....	...	85 3 0	...
Miscellaneous Museum Receipts .....	2 10 0	7 2 0	...
Miscellaneous Receipts .....	0 18 2	6 0 0	728 7 10
Patrons' Contributions .....	4 8 0	—	...
Rent of Special Pamphlets .....	0 12 0	...	...
Rent of Lecture Theatre .....	175 6 0	301 7 11	...
Members' Subscriptions .....	3,649 12 0	3,694 10 0	307 7 11
Extra Subscriptions .....	183 8 0	147 5 9	...
Entrance Fees .....	210 19 0	220 10 0	...
Life Subscriptions .....	573 0 0	502 10 0	...
Dividends and Interest .....	526 11 8	4,465 4 9	...
Government Grant .....	750 0 0	458 17 3	...
		750 0 0	1,208 17 3
Balance carried to Balance Sheet ...	293 5 9	...	805 19 3
Total .....	26,876 14 8	26,876 14 8	26,876 14 8

DR.

## BALANCE SHEET, 31st DECEMBER, 1908.

OR.

1907.		1908.	
£	s. d.	£	s. d.
30,113 2 5	To Balance, 31st December, 1907	30,522 13 5	By Balance from Revenue Account
237,115 19 2		237,115 19 2	By Balance
236,822 13 5		236,822 13 5	
36,822 13 5 To Balance		23,101 16 8 By Outlay on New Building	
1,413 15 11	" Sundry Creditors	280 0 0	" Furniture
31 5 0	" Subscriptions paid in advance	148 12 0	" Journal Index in Stock
	" General Reserve Fund—	450 0 0	" Investments—
	31st December, 1907	2,437 18s. 2d.	Canada 3 p.c. (at cost)
	Dividends, 1908	1,300 0 0	" £1,200 3s. 7d. Consols 2½ p.c. (at cost)
		2,656 6 9	" £2,421 18s. 8d. India 3½ p.c. (at cost)
		2,984 0 0	" £3,044 17s. 11d. India 3 p.c. (at cost)
		3,076 5 3	" £3,076 8s. 4d. Nottingham Corporation 3 p.c. (at cost)
	To Balance due to Bank	1,300 0 0	" £1,100 10s. 6d. West Coast Corporation 3 p.c. (at cost)
		2,325 0 0	" £5,000 Hull and Barnsley Railway Ordinary Stock, valued 31st December, 1897 (Trench Gascoigne Gift)
		500 0 0	" £473 17s. 9d. Canada 3½ p.c. (at cost)
		1,010 19 2	" £1,052 8s. 4d. Ceylon 3 p.c. (at cost)
		1,046 16 8	" £1,161 6s. 8d. London County Council 3 p.c. (at cost)
		412 19 5	" Sundry Debtors
		3 5 6	" Cash in hand
240,496 1 6		240,496 1 6	
240,451 9 2		240,451 9 2	

We have examined the above Balance Sheet and Revenue Accounts with the Books and Vouchers and certify the same to be correct.

All our requirements as Auditors have been complied with. We have verified the Cash Balance and Investments set out in the Balance Sheet, and, subject to the General Reserve Fund being sufficient to provide for the depreciation of the Lease and for any depreciation in the value of the Investments, we are of opinion that the Balance Sheet is properly drawn up and correctly shows the position of the Royal United Services Institution on the 31st December, 1908.

61, Fove Street, E.C.

28th January, 1909.

WILDE AND FERGUSON DAVIE, Chartered Accountants,  
Auditors.

# CHESNEY MEMORIAL MEDAL FUND.

DR.		31st DECEMBER, 1908.		CR.	
		1908.			
Jan. 1.	To Balance, 31st December, 1907	£ s. d.			£ s. d.
		49 17 8			57 10 8
June 2.	" 6 mths. Div. £250, Bengal & North-Western Ry. Pref. Stock	3 14 6			
Oct. 1.	" " " " " "	3 16 6			
		<u>£87 10 8</u>			<u>£57 10 8</u>

We hereby certify the above Account to be correct.

61, Fore Street,  
25th January, 1909.

WILDE AND FERGUSON DAVIE, Chartered Accountants,  
Auditors.

# TRENCH GASCOIGNE PRIZE FUND.

DR.		31st DECEMBER, 1908.		CR.	
		1908.			
Jan. 1.	To Balance, 31st December, 1907	£ s. d.			£ s. d.
		5 9 9			31 10 0
May 15.	" 6 mths. Div., £1,802 18s., North Brit. Ry. Deb. Stock	26 11 0			21 0 0
Nov. 12.	" " " " " "	26 11 0			6 1 9
		<u>£58 11 9</u>			<u>£58 11 9</u>

We hereby certify the above Account to be correct.

61, Fore Street,  
25th January, 1909.

WILDE AND FERGUSON DAVIE, Chartered Accountants,  
Auditors.



The CHAIRMAN: I have now to propose that the Report with Accounts, as circulated, be taken as read and adopted. As you all have a copy of the Report of the Council, I do not think there is any need for me to refer to it. I hope the Meeting will agree with me, when I say that the affairs of the Institution are in excellent order. A good deal of work has been done for the improvement of the Institution generally during the year. I take this opportunity of saying that I think the thanks of the Institution are greatly due to the Sub-committees, on whom nearly the whole of the work falls, together with the Secretary and his staff (Hear, Hear). I do not think people quite realise what the Sub-committees really do. They have to spend a great deal of time here, very often at great inconvenience, and a great deal more is done by them than one would infer from the reading of the Report.

I should just like to refer to Lieut.-Colonel Baylis, whose death we all greatly deplore. He was for a long time a Member of the Institution, a Member of the Council, and a Vice-President, and the Institution owes a great deal to him for the work which he devoted to its welfare. I should also like to say that the Staff of the Institution have done very good service—I refer more particularly to the Library and Museum attendants. Of course, we all know that they are only doing their duty, but still there are two ways of doing it; they have responded to the calls made upon them, and have given great satisfaction to the officials, and I am glad to say this word of encouragement about them.

I think I need not say anything more, but I will simply move, "That the Report and Accounts, as circulated, be taken as read and adopted."

Lieut.-General H. D. HUTCHINSON, C.S.I.: I have much pleasure in seconding the resolution of the Chairman.

Colonel W. A. HILL, C.B. (Chairman of the Finance Committee): My lords and gentlemen. It has always been the custom at the Anniversary Meeting for the Chairman of the Finance Committee to make some remarks, and to give any explanation that may seem desirable, with regard to some of the principal items in the Accounts that are laid before you. I will first take the expenditure. There has been an increase in the Journal printing of £127. This is due mainly to the fact that there has been an alteration in the type, and therefore, the standing matter which was already in type had to be paid for. That is an item which will not occur again. There has been a decrease in postage of some £40, due to lighter paper being used for the Journal. There is an item showing an increase of £85 with regard to the Museum catalogues; this, however, is balanced by a corresponding item on the other side in the receipts. With regard to wages, there is an increase of £112. An extra cleaner having been required for the arms, and also a man has been employed instead of a boy in the Library. The water rate, under the new Water Board has increased by the amount of £45, virtually double. It seems very hard that in this Institution, when the amount of water that is used is almost of an infinitesimal quantity—it not being a residential place—

we should have to pay over £90 for water. We only use a few thousand gallons per annum. Under the head of Repairs there is an increase of £444, a very large increase. This is caused principally by the requirements of the Board of Works under whose directions we had to make a great many necessary repairs, provide a new boiler, repaint the greater part of the Museum and provide new heating apparatus, etc. I may say that we wished to carry this amount to capital expenditure, but the auditors for some reason would not allow it, so we have had to place it to revenue. There is an increase of £130 in advertising. The average amount for advertising has generally been £80, so the increase is not very great. This increase in advertising has resulted in a very marked increase in the number of paying visitors to the Museum, and we consider that the amount so laid out was well expended. An item that may excite your curiosity is the one as to lecture expenses. There is a loss of £75 in connection with that. It is due to our having had to pay the lecturers, and the amount of fees received from the officers who attended the lectures not coming up to that amount. That item has nothing to do with the ordinary lectures given before the Institution, but refers to the lectures on military examination subjects, but this year only history lectures will be undertaken. The excess in printing of £150 will not occur again, owing to the Journal expenses being very materially reduced.

I will now take the receipts on the other side. It is very satisfactory to see that the Lending Library receipts have increased by £22. Museum admissions show an increase of £594 on last year, but during a portion of last year you will remember that the Museum was closed. The total of £631 received from admissions, however, is much in excess of the average amount. The sale of the catalogues, £85, I think we must all consider very satisfactory indeed. The catalogue has been a great help in explaining the interesting exhibits in the Museum, and they have been bought very well by visitors, and we expect to recoup ourselves and get a very considerable profit during the next two or three years from the sale of them. The rent of the theatre has increased by £26 and the subscriptions of members by £45. The life subscriptions you will notice have diminished by the amount of £70, but this is always a very fluctuating item and next year there may be a corresponding increase. The dividends on our investments are less by £48. This is due to the depression in gilt-edged securities, a condition of things we are all very well acquainted with.

The temporary overdraft at the Bank has long since been liquidated and we have now a considerable balance in hand. You will notice that there is an increase in receipts from all sources of £410, and the amount of stock held is increased by £63. That seems to be a very satisfactory state of affairs. I may also mention that there has been a diminution of expenditure up to date since the end of the financial year of upwards of £800 as compared with the corresponding period of last year, and if that saving is anything like continued throughout the year we shall have a very prosperous account to give you at the end of it. We anticipate considerable reductions

in expenditure, and there is every prospect of an increase, if only a small one, in the revenue. In this connection, with the increase of the revenue and decrease in expenditure, I should like to draw your attention to the great indebtedness of the Institution and its members to the unremitting exertions of our Secretary and Curator, Colonel Leetham (Cheers). The Museum and the Institution generally bear evidence of his great skill in organisation and the great attention he has paid to the affairs of the Institution, and if, as we anticipate, there is an increase in revenue and a decrease in expenditure during the coming year, I am sure we shall owe it mainly to his suggestions and advice (Cheers).

Colonel LONSDALE HALE (Chairman of the Library and Journal Committee): My lords and gentlemen. It is my privilege to again appear as Chairman of the Journal and Library Committee, and I have some remarks to make in connection with that branch of the Institution. In all the years I have been connected with the Institution I have never known a branch that made such progress in every way as this has done during the last year (Hear, Hear). The first point to which I wish to call your attention is a change in the distribution of the work of the officers of the Institution. Captain Garbett, who for many years has been Editor and Librarian, will now be Editor only. Major Wylly, who has been assistant editor and assistant librarian, will now be in charge of the Library. We have separated entirely the work of the Journal from the work of the Library, and I want to explain to you the reason. When Captain Garbett inherited from somebody else the joint office of Editor and Librarian, the double work was small and perfectly within the grasp of one man to carry out. The Journal itself was small and there was very little to do in the Library, and the work was under his eye when he sat in the Library. But under Captain Garbett's foster and care the Journal has assumed very large dimensions. If you will only compare the circulation of the Journal to-day with the circulation of that when Captain Garbett took it in hand, you will realise what he has done for it. Then as to the increased use by the members of the Library, since that time the lending Library has been going ahead, and nobody who is not closely connected with the place has the slightest idea of the way in which members away from London, from all parts of the country, make use of our Library, either by drawing books from it or writing to the Staff to ask what books there are on a particular subject (Hear, Hear). Then with the increase in the number of works the Library overflowed the room in which it was. We were not well off financially and the Finance Committee could not give us shelter. The result was that Captain Garbett had to do his best, taking the books out of the Library and putting them where he could. Eventually we got some room at the north end, but from the date that the overflowing of the Library took place it became impossible for any man, however eager and energetic he was, to supervise thoroughly both the Journal and the Library. We had a special Committee and the question came twice before it; it also came three times before the Library

and Journal Committee and three times before the Council. It was thoroughly threshed out and I am perfectly certain that we have adopted the right course. We have now the Journal completely under one officer, the working of the Library being entirely under another. We can see now from these last two months how well the alteration is working. Do not think we have thrown over Captain Garbett's valuable knowledge—we are still going to make use of it. We have two important catalogues to make. One is with regard to our manuscripts, we have had a large increase in the number of valuable manuscripts sent to us, and anybody who knows anything of our old catalogue knows we have not got a manuscript catalogue worthy of the name. I am sure that no one knows what is in these manuscripts more than Captain Garbett, who I can say from my own knowledge combines more than any other man I know, a knowledge of general history and a knowledge of Naval and Military history. He will take in hand at once under the Library Committee, the preparation of a catalogue of these manuscripts, and we are very fortunate to secure his services in that respect.

I must now refer to the maps. At the last Council Meeting I had not quite completed my work there. I went through nearly 6,000 maps, but I could not devote any more time to the work. I found the maps were divided into two classes, one, those required by military and naval officers in connection with naval and military work carried on in the time of Marlborough, and the second class being composed of a number of old maps. I took the military ones in hand, and I was enabled with the invaluable assistance of Mr. Harper to make a catalogue of all the military and naval maps in the Library (Hear, Hear). The other class is still in the old green catalogue. Captain Garbett will take that portion of the work in hand and you will have at last a map catalogue worthy of the name (Hear, Hear). I am quite sure the change in the Staff has been thoroughly for the good of the Institution (Hear, Hear).

That is not the only work which has been done by the Staff. You may have as active a Council and as active Committees as you like, but this Institution, so far as the comfort of the members is concerned, depends mainly on the Staff. In 1896 I spent six weeks in putting in order the outer Library in the gallery in the Banqueting Hall. I had made a catalogue of a large portion of the books, but unfortunately I had to leave some hundreds of books unsorted, and a hoard of energetic charwomen who wanted to clean the floor forced open the presses, banged all these hundreds of books into my beautifully arranged collection and there they have remained up to the present day with nobody to look after them. Then, at the further end, there was a certain amount of confusion owing to the transfer of the books outside. Now, you will not get any information out of the Finance Committee as a rule; they are simply like flint. The only way is to horrify them, and I am thankful to say that both Colonel Hill and Colonel Leatham were horrified on going one day over the outer Library to see the state it was in. That was the time to get at them, and I suggested that they should hand



over to me the outer Library in the Banqueting Hall and give me some money. They gave it to me and I took charge, because I did not want Captain Garbett to be taken away from his work, and I had intended to work with Mr. Harper, giving him directions and coming up from time to time to see that my directions were being carried out. But on the second day fortunately in came Major Wylly, and he suggested that he should lend a hand. I am only too thankful, and the Institution has reason to be grateful to him for having joined in the work. Now, to give you an idea of what the work was of putting the Library into order—and I shall be glad if any member will afterwards come up and have a look at it; it now is simply a model library—I might mention that we had some 12,000 volumes all in confusion. Every one of those 12,000 books had to be absolutely handled. I handled about 3,000 of them with Major Wylly. Then they had to be put in their proper places, there had to be a special label put on each and a list made of the whole 12,000. That had to be done in three months, and Major Wylly and Mr. Harper worked like slaves to get through the whole of that enormous work in that time—and they succeeded. Our thanks are greatly due to them for the way in which they accomplished the task (Cheers). During that time, of course, we came across a number of books which we did not think needed to be kept in the Library, as we are very short of shelves and cases. I think we got together some 3,000 books for sale, and we handed them over to Colonel Leetham, with the result that he sold them to a second-hand bookseller for a sum that covered the whole of the expenses of that work. An energetic member of the Council came to us when we were in the middle of the work and said "This is very unfair. You should give the members of the Institution a chance of buying these books second-hand." Well, it was a very noble suggestion, and we waited for that member of the Council, a most valuable member, to give us some hint how to do it. The Council met again the following month, but he did not come to that Council, so all the good feeling on his part was thrown away. How could we have turned this Institution into a second-hand book shop of 3,000 books? Then there is another point. Those of you who use the Library will know that anything more detestable than our identification marks cannot be known; the system was evidently copied from over the way. If you want to get an old book, say, from No. 27 press, Shelf A, at the top, where all the titles are worn out, on going to the shelf you find at least 30 volumes which are marked 27A, and you have to take all of them down till you get to the right one. We are going to adopt a different system, and in future the books will be numbered 27, I., 27, II., 27, III., and so on.

With regard to finance, I think that when people have been long in charge of finance in a branch they get rather lax and I do not think they are calculated to carry out any great reforms. I think this is very probable in regard to the Library and the Journal—the expenditure on which for years has entirely rested in the hands of the Library and Journal Committee—that a great deal of improvement is possible. I fought against the proposed



change for some time, but it became evident to me that the Library and Journal needed improving, so we have handed over this year the whole of the control of the finances of the Library and Journal to the Finance Committee—for the reason that Colonel Leetham was their executive officer and he has a great knowledge of the details of publishing and printing. This will cause an immense amount of extra trouble to him, but he has kindly undertaken it. Therefore, I must say I was uncommonly glad—and I am sure you will be glad, too—that at the Council meeting, when Colonel Leetham's term of five years came to an end, he intimated that he wished to continue as our Secretary (Cheers). I am sure he will be able to carry out great financial economies.

One more word, with regard to our relations with the Admiralty and War Office, which in the old days were those of conflict, but which are now simply those of pleasant contact. We owe much to Admiral Slade and Admiral Field for the way in which they are helping our Journal. As you know the Admiralty do not care very much about lectures here, however, they are supplying us with translations of valuable articles which they have not perhaps the time or money to publish themselves. Then we owe our best thanks to Colonel Haldane, who is the War Office representative. He is a constant attendant at the Committee and his interest in the Institution cannot be surpassed. He has obtained for us the right and the privilege of publishing every month that series of new works, and whenever he finds anything valuable he sends it over to us. Therefore, we owe very great thanks both to the Admiralty and to the War Office for the way they have been treating us. I am sorry to have kept you so long, but these, I think, are matters of interest to the members of the Institution (Cheers).

Commander W. F. CABORNE, C.B. (Chairman of the Museum Committee): My lords and gentlemen. I will not detain you for more than one or two minutes, but it is usual for the Chairman of the different Committees to say a few words with regard to the work of their respective departments. I should like to point out that the collection in our Museum is increasing every year, alike in value and historic interest, and that no pains are spared to show it off to the best advantage and to keep the different exhibits clean and in proper order. Although there is a Committee in charge of the Museum Department, it is needless to say that the bulk of the work falls upon my friend, Colonel Leetham, who is very ably assisted by the Assistant Curator, Captain Sargeaunt. The wind has been rather taken out of my sails with regard to Colonel Leetham and the staff by the remarks of some of the previous speakers, and I beg to very strongly endorse everything that has been said about them. Colonel Leetham and Captain Sargeaunt are both very enthusiastic about the Museum, but it is needless for me to point out to you that enthusiasm without knowledge would be of very little practical use. Happily, however, not only have these two gentlemen great enthusiasm, but they also have very great knowledge of this description of work. I was

extremely pleased to hear you, my lord, make some appreciative remarks with regard to the attendants. They are all very well up in the details of the Museum and show the utmost courtesy to visitors. I have observed the kindly interest they manifest very frequently myself, and their conduct helps very materially to popularise our Museum, which I need hardly remind you is a paying part of the Institution, bringing in a certain amount of revenue. Therefore, from every point of view, the Museum is not to be in any way despised by the members. (Cheers).

The CHAIRMAN : Does any Member wish to make any remarks on the Report ?

Captain C. SLACK : I would like to make a remark with reference to the subscription being increased. It has always appeared to me to be an anomalous position for the Members of this Institution to be in that when they have paid their entrance fee and subscription they should be asked to pay something extra in order to use the Library. I believe this matter has been discussed before, but I do not see any harm in bringing it up again—in raising the subscription so as to include the Library fee—I do not want to name a figure but I should suggest 30/- or £2. I cannot but think that with more money obtained in that way the utility of the Institution might be very much increased. There is one thing more I would like to say. I have asked about those beautiful models of various modern men-of-war which we used to have in the Museum. Now I do not see one of them. It has been explained to me that they are not available, but if they could by any means be obtained, I think it would be a very great addition to the Museum. Years ago when I first had to do with this Institution, it was a delight for me to go in and look at those ships ; I could look at them for hours. They were beautiful models, with all the details shown. With reference to the Journal, for my part I should like to see more illustrations in it. I have already mentioned this point to some members of the Council, but I will refer to it again. I think that the future of books and all literature very largely hinges on having illustrations and maps, and I think that remark applies to our Journal very particularly. I may say that as a Member of the Royal Geographical Society I have closely examined all the books that come in, and really they come in so plentifully that one has only time just to look at the title and a few illustrations. But still, for all that, the utility of a magazine I think largely consists in the illustrations and in the maps which are given, and if more money could be devoted to that object in regard to our Journal, I think it would be appreciated by the Members and also make it much more interesting.

The CHAIRMAN : With regard to the proposal about increasing the subscription, the matter was discussed and very closely gone into on all sides by the Council some time ago, and the result was that they thought it was preferable to get increased numbers rather than increased subscriptions.

They thought by keeping the subscription what it is at the present time more people were likely to become members. (Cheers).

Commander CABORNE : With regard to the question of modern Naval models in the Museum, it is true that we had a number of them at one time, but we were obliged to send them away while the Banqueting Hall was being renovated. Since then we have tried to obtain models of the latest warships, but the Lords of the Admiralty object to our showing those particular vessels. We are all perfectly agreed that it would be an excellent thing to have those models, and the Museum Committee would be delighted to exhibit them, but it is out of our power to do anything in the matter.

The motion for the adoption of the Report and Accounts was then put and carried unanimously.

#### RE-ELECTION OF AUDITORS.

Colonel The Hon. O. V. G. A. LUMLEY : My lords and gentlemen. I beg to propose, "That the thanks of the Meeting be accorded to the Auditors, Messrs. Wilde and Ferguson Davie, for their services, and that they be re-elected Auditors for the ensuing year at a fee of twenty-five guineas."

Colonel R. B. COLVIN, C.B. : I shall be very glad to second that.

The resolution was put and carried unanimously.

#### ALTERATION OF BYE-LAWS.

Colonel C. G. DONALD, C.B. : My lords and gentlemen. I have been asked to propose one or two slight alterations in our Bye-Laws, which have been rendered necessary by the change of organisation in the Forces last year. My motion is :

"That Chapter III., Section I. of the Bye-Laws, which now reads :—

'The following are eligible for membership without ballot :—Princes of the Blood Royal, Lieutenants of Counties, Governors, Deputy Governors, and Administrators of Colonies and Dependencies, and the following whose names appear in the official Navy and Army Lists :—Commissioned Officers of the Royal Navy, Regular Army, Royal Marines, Militia, Indian and Colonial Naval and Military Forces, Royal Naval Reserve, Imperial Yeomanry, Volunteers, Volunteer-Cadet Battalions and Corps, Midshipmen of the Royal Navy and Royal Naval Reserve, Naval Cadets, and retired officers of the above ranks.'

"be made to read as follows :—

'The following are eligible for membership without ballot :—Princes of the Blood Royal, Lieutenants of Counties, Governors, Deputy Governors, and Administrators of Colonies and Dependencies, and the following whose names appear in the official Navy and Army Lists :—Commissioned Officers of the Royal Navy, Regular Army, Royal Marines, Special Reserve, Reserve of Officers, Militia, Indian and Colonial Naval and Military Forces, Territorial Force, Royal Naval Reserve, Yeomanry, Volunteers, Volunteer-Cadet Battalions and Corps, Midshipmen of the Royal Navy and Royal Naval Reserve, Naval Cadets, and retired officers of the above ranks.'

"That Chapter III., Section II., which now reads :—

'The following are eligible for membership by ballot of the Council :—Officers retired from the services enumerated above, and whose names do not appear in the Official Navy and Army Lists, Cadets of the Royal Military Academy, Royal Military College, and Royal Military College, Kingston, Canada, Officers of recognised Indian and Colonial Military Police and similar bodies, Officers of the Royal Irish Constabulary, retired Governors, Deputy Governors, and Administrators of Colonies and Dependencies, Deputy Lieutenants of Counties, Civil Functionaries, who are or have been attached to the Naval and Military Departments, the Master, Deputy Master, and Elder Brethren of the Trinity House, and Navy and Army Agents.'

"be made to read as follows in the latter lines :—

'Administrators of Colonies and Dependencies, Deputy Lieutenants of Counties, Chairmen and Members of Territorial Force Associations, Secretaries of Territorial Force Associations, Civil Functionaries, who are,' etc.'

"That Chapter IV., Section II., which now reads :—

'It is hereby declared that the proportion of Naval and Military Members shall be as one to two. The Naval Members of the Council shall comprise six Officers of the Royal Navy, one of the Royal Marines, and one of the Royal Naval Reserve. The Military Members of the Council shall comprise ten Officers of the Regular Army, two of the Militia, one of the Yeomanry, and three of the Volunteer Forces.'

"be made to read as follows in the latter lines :—

'The Military Members of the Council shall comprise ten Officers of the Regular Army, two of the Special Reserve, and four of the Territorial Force, of whom one shall belong to the Mounted Branch. Retired Officers of the above-mentioned services shall be eligible, including those of the late Militia and Volunteers."

Commander W. F. CABORNE : I have much pleasure in seconding that resolution.

Major A. I. MENZIES : With reference to the suggested amendment of Chap III., Section I, of the Bye-laws, among the persons who are eligible for membership without ballot, are those belonging to the Territorial Force. Now, Sir, what I am going to say may seem at the outset to be frivolous, but I am certain it has a serious aspect. I refer at the beginning to a force which has been created in the enthusiasm of the moment, the Mounted Female Nurses. Now this force has been attached, or they have attached themselves, to the Yeomanry, which is part of the Territorial Force. I am well aware that at the present moment this force is not officially recognised, but I think I may say, speaking in metaphor, that it has been "winked at" (Laughter). What I would point out is this, that in the next twelve months it is quite possible that these ladies—and the officers commanding this corps already wear uniform and badges of rank and use their title—will find their way into the Army List and be officially recognised, and as I take it that within the next twelve months it may not be possible to alter this rule again, I assume that under the rule as we are now amending it any lady who holds a commission and whose name is in the Army List as part of the Territorial Army, would be eligible for membership of this Institution. I should like to know if that is not the fact ; and I think it is a matter for the Council to consider whether we should not guard against a lady suddenly becoming eligible for membership without ballot.

Colonel LONSDALE HALE : Did I hear the gentleman say "guard against" ?

Major MENZIES : Yes, I did.

Colonel LONSDALE HALE : I was in hopes that they would come on the Council. (Laughter.)

The CHAIRMAN : I understand by the Rules of the Institution that ladies are not eligible, so the question hardly arises at this moment.

The resolution was then put and carried.



## NOMINATIONS FOR VACANCIES ON THE COUNCIL.

The undermentioned Officers were nominated for the vacancies on the Council :—

*Regular Army (Three Vacancies)* :—Colonel C. G. Donald, C.B. (half-pay, late Royal Fusiliers) ; Colonel L. A. Hale (late R.E.) ; Lieut.-General Sir E. T. H. Hutton, K.C.M.G., C.B. ; Colonel Hon. O. V. G. A. Lumley (half-pay, late 11th Hussars), Commanding 1st South Midland Mounted Brigade, Territorial Force ; Brigadier-General Sir H. S. Rawlinson, Bart., C.V.O., C.B. (Commanding 2nd Infantry Brigade).

*Territorial Force (Two Vacancies)* :—Colonel the Lord Bingham, 5th Battalion the London Regiment (London Rifle Brigade) ; Colonel T. S. Cave, Commanding South Midland Brigade, Territorial Force ; Colonel J. W. Greig, 14th Battalion the London Regiment (London Scottish) ; Colonel H. C. C. D. Simpson, C.M.G., Commanding Territorial Artillery, Western Command.

BALLOT TO FILL THREE REGULAR ARMY AND TWO TERRITORIAL  
FORCE SEATS ON THE COUNCIL.

There being no competition for the seats for the Special Reserve, Territorial Force (Mounted Branch) and Royal Naval Reserve, the following officers, having been duly nominated, were elected :—

Colonel W. A. Hill, C.B. (late 3rd Battalion Gloucestershire Regiment) ; Colonel R. B. Colvin, C.B. (Essex Yeomanry) ; Commander W. F. Caborne, C.B., R.N.R.

## REPORT OF REFEREES ON THE 1908 NAVAL ESSAYS.

The CHAIRMAN : The Secretary will now read the Report of the Referees on the 1908 Naval Essays.

The SECRETARY read the Report as follows :—“ Having carefully considered eighteen Essays submitted to us by the Council we have unanimously decided to award the Gold Medal and the First Prize to the Essay bearing the motto : ‘ Whomsoever commands the sea commands the trade ; whomsoever commands the trade of the world commands the riches of the world, and consequently the world itself ’ ; and the Second Prize to the Essay bearing the motto : ‘ Our doubts are traitors and make us lose the good we oft might win by fearing to attempt. ’ We further recommend that the Essays bearing the mottoes ‘ Non sibi sed Patriae,’ and ‘ Regions

Caesar never knew thy posterity shall sway,' to the favourable notice of the Council and suggest that they should be printed in the Journal. We have the honour to be, Sir, Your obedient servants, A. K. Wilson, Admiral of the Fleet, Charles Campbell, Vice-Admiral, E. E. Bradford, Rear-Admiral."

The SECRETARY: The Essay bearing the motto "Whomsoever commands the sea" was written by Major A. B. N. Churchill, Reserve of Officers, Royal Artillery. (Cheers.)

The Essay bearing the motto "Our doubts are traitors" was written by Commander T. L. Shelford, Royal Navy. (Cheers.)

The Essay bearing the motto "Non sibi sed Patriae" was written by Lieutenant Thomas Fisher, R.N. (Cheers.)

The Essay bearing the motto "Regions Caesar never knew" was written by Captain Richard Fortescue Phillimore, M.V.O., R.N. (Cheers.)

#### VOTE OF THANKS TO REFEREES.

Admiral of the Fleet Sir G. H. U. NOEL, K.C.B., K.C.M.G.: My lords and gentlemen, I have been asked to propose a vote of thanks to the Referees, Admiral of the Fleet Sir A. K. Wilson, Vice-Admiral Sir C. Campbell, and Rear-Admiral E. E. Bradford for their valuable services for adjudicating on the Essays. I am sure you will agree with me that the Council could not have made a better selection than these officers, and we are most thankful to them for their services. It is no small thing to read and digest and decide upon eighteen essays. It means a good deal of time and a good deal of thought; and I understand that there was great difficulty in coming to a decision, as on this occasion the essays were so excellent. That is a satisfactory state of things.

Lieut.-General Sir E. T. H. HUTTON, K.C.M.G., C.B.: My lords and gentlemen. I have much pleasure in seconding the proposition made by the proposer. Having had some little experience of the difficulties of being referee under the circumstances, I very cordially endorse the proposal made by the Admiral.

The proposal was then put and carried unanimously.

Vice-Admiral Sir C. CAMPBELL, K.C.M.G., C.B., D.S.O.: I should like with your permission, Sir, to acknowledge the vote of thanks on the part of the Referees. On a former occasion when I was associated with Admiral Sir Arthur Wilson the essays were of such a poor nature that we were obliged to report and ask the Council not to award the medal for that year. On this occasion it was exactly the opposite. There was not one single essay sent in that would not have been fit to gain the Gold Medal had it been the only attempt submitted. (Cheers.)

PRESENTATION OF THE CHESNEY GOLD MEDAL TO THE  
HON. J. W. FORTESCUE, M.V.O.

Colonel LEETHAM : Perhaps I ought to say that I have just received a note from Mr. Fortescue who was to have been present this afternoon to have received his medal, saying that owing to the death of a near relative this morning he regrets he is unable to be present to receive the medal.

Lieut.-General H. D. HUTCHINSON, C.S.I. : I am sure that all of us are extremely sorry to hear the news which has just been communicated by the Secretary. I was to have asked you, Sir, to present this afternoon the Chesney Memorial Medal to the Hon. J. W. Fortescue, M.V.O., who is the King's Librarian at Windsor, in consideration of his valuable contribution to military literature. Sir George Chesney, as you all know, died in 1895, and at that time a Committee was formed among his friends and brother officers to raise funds for the purpose of establishing a memorial to his memory. When this had been satisfactorily accomplished there was a surplus, which was handed over to the Council of the Institution in order that they might award from time to time, as the funds would admit, a Gold Medal to the author of an original literary work treating of naval or military science, or literature which had bearing on the welfare of the British Empire. During the years that have elapsed since then this Medal has only been awarded twice by this Council. It was awarded in 1898 to Captain Mahan for his well-known works on naval matters on the command of the sea, and in 1907 to Sir Frederick Maurice. Therefore, the rare occasions on which this Medal has been awarded by the Council must greatly enhance its value. This year the Council have awarded it to the Hon. J. W. Fortescue in recognition of his work, "The History of the British Army." All of you who have seen that work know what a monumental work it is. Although it is not even yet completed, four large volumes which aggregate 2,765 pages, have been compiled, and they have been and will be of immense value to every student of the history of the British Empire. (Cheers.) In those circumstances the Council thought fit to award the Chesney Medal to him.

VOTE OF THANKS TO OFFICERS OF THE COUNCIL.

General LORD WILLIAM SEYMOUR, K.C.V.O. : My lords and gentlemen. I have been deputed to propose a vote of thanks to the following Officers who, having served three years on the Council, or having proceeded on a tour of service abroad, now retire :—

*Regular Army* :—Colonel C. G. Donald, C.B. ; Colonel L. A. Hale ; and Colonel The Hon. O. V. G. A. Lumley.

*Special Reserve and Militia* :—Colonel W. A. Hill, C.B.

*Territorial Force* :—Colonel T. S. Cave ; and Colonel W. C. Horsley.

*Royal Naval Reserve* :—Commander W. F. Caborne, C.B.

It is hardly necessary for me to make any remarks. The Council may be regarded as a train—an express train—on a grand railway line. We have heard that the Staff have done their duty in so particularly excellent a way that they may be regarded as the engine driver on the engine. But we may say that the engine driver and his machine would be useless if it were not for the other officials—the gentlemen who we have heard this afternoon applying the break, are the conductors—whom we may look upon as representing the Council. I have the honour to move the resolution which I have read.

Admiral the Honble. Sir E. R. FREMANTLE, G.G.B., C.M.G. : I have great pleasure in seconding this motion. I am glad to see that Colonel Lonsdale Hale, who has so often enlightened us with reference to the dealings of the Council, is likely to be once again on the Council—at least I see he is one of the candidates, and I trust he will be re-elected in order that we may have the benefit and advantage of his remarks as a member of the Council in future. (Hear, Hear).

#### RESULT OF BALLOT.

The CHAIRMAN announced that the Scrutineers (Colonel E. T. Rodney Wilde and Major H. Huntington) reported that out of the Regular Army, Colonel Lonsdale Hale, Colonel C. G. Donald and Colonel O. V. G. A. Lumley had been elected to fill the three vacancies for the Regular Army, and that Colonel the Lord Bingham and Colonel T. S. Cave had been elected to fill the two vacancies for the Territorials.

#### VOTE OF THANKS TO THE CHAIRMAN.

Vice-Admiral Sir C. CAMPBELL, K.C.M.G., C.B., D.S.O. : I have great pleasure in moving a vote of thanks to our Chairman for presiding to-day. It is needless to speak about such a matter. I am sure we all feel the honour he has done us in presiding over us to-day, and our earnest thanks are due to him for the great good he has done for the welfare of the Institution. (Cheers). I am sure you will all grant him a hearty vote of thanks for presiding to-day.

Major-General Sir J. MOODY : I have great pleasure in seconding Sir Charles Campbell's motion. It is an especial pleasure to me as Lord Walter is a very old friend of, I think it is, nearly fifty years' standing. I have much pleasure in supporting everything that the proposer has said, and I am very happy to second the motion. (Cheers).

The motion was then put and carried with acclamation.

The CHAIRMAN : I have to thank you, Sir Charles Campbell and Major-General Moody, for the way in which you have moved and seconded this vote of thanks, and also you, gentlemen, for the way in which you have received it. It has been a great pleasure to me to have been here to-day. I wish I could have discharged my duties better, but I have been rather in a new situation. However, I managed to get through somehow, I hope to your satisfaction.

The meeting then terminated.



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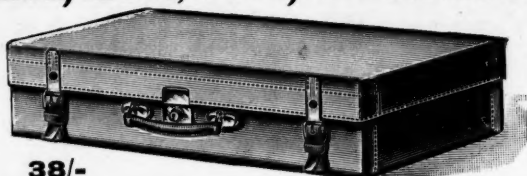
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The following Officers, whose names are arranged in regimental order, were successful from us at the recent Competitive Examination for admission to the Staff College

Capt. A. F. Home, 11th Hussars.  
" J. Knowles, 15th Hussars.  
" C. R. Newman, Royal Field Artillery.  
" P. E. Lewis, Royal Field Artillery.  
" M. H. C. Bird, Royal Garrison Artillery.  
" G. G. Fuller, Royal Engineers.  
" G. R. Frith, Royal Engineers.  
" T. C. Mudie, Royal Scots.  
" I. L. B. Vesey, Royal West Surrey Regiment.  
" H. G. A. Thomson, Royal Warwickshire Regiment.  
" E. T. Humphreys, Lancashire Fusiliers.  
" D. S. Robertson, Royal Scots Fusiliers.  
" H. L. Alexander, Dorsetshire Regiment.  
Lieut. A. P. Wavell, Royal Highlanders.  
Capt. H. C. Johnson, D.S.O., King's Royal Rifle Corps.  
" R. M. Tyler, Durham Light Infantry.  
Lieut. A. J. McCulloch, Highland Light Infantry.  
Capt. L. C. Sprague, Royal Irish Rifles.

Capt. L. F. Rennv, Royal Dublin Fusiliers.  
Lieut. C. M. Davies, Rifle Brigade.  
Capt. R. D. Barbor, Army Service Corps.  
" C. L. Norman, M.V.O., Indian Army.  
" G. L. Pepys, Indian Army.

### The following obtained Nominations:

Major S. R. Kirby, 6th Dragoon Guards.  
Capt. R. Hutchison, 11th Hussars.  
" E. F. Calthrop, Royal Field Artillery.  
" and Bt. Maj. A. J. Turner, Royal Field Artillery.  
" and Bt. Maj. C. B. Thomson, Royal Engineers.  
" and Bt. Maj. A. J. G. Moir, Royal Scots.  
" and Bt. Maj. A. McN. Dykes, Royal Lancaster Regiment.  
" A. D. Green, D.S.O., Worcestershire Regiment.  
" T. H. C. Nunn, D.S.O., Royal West Kent Regiment.  
" H. L. Knight, Royal Irish Fusiliers.

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### November, 1908.

7th	...	C. E. R. POTTINGER	...	6,800
16th	...	A. T. H. HAYES	...	6,444
32nd	...	R. BLEWITT	...	6,166
43rd	...	F. W. B. WILSON	...	5,947
—	...	N. W. TRIBLE	...	5,573
—	...	G. S. LEVENTHORPE	...	5,320

### June, 1908.

Third	...	G. B. STALLARD	...	7,029
22nd	...	L. F. PAGE	...	6,564
23rd	...	G. E. W. FRANKLYN	...	6,559
29th	...	G. A. CANNELL	...	6,417

## SANDHURST.

### November, 1908.

#### CAVALRY.

3rd	...	J. A. BATTEN-POOLL	...	4,464
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#### INFANTRY.

7th	...	C. F. KYDER	...	5,300
49th	...	J. G. HALSTED	...	4,264
68th	...	M. A. S. COUSINS	...	4,105
68th	...	A. E. MAYLAND	...	4,087
69th	...	D. K. S. GRANT	...	4,083
74th	...	W. A. BURGESS	...	4,019
—	...	C. G. HUME	...	2,609

## INDIAN POLICE (JUNE, 1907).

Third	...	F. W. TONS	...	6,886	27th	...	H. W. Waite	...	5,980
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## ARMY QUALIFYING (1908).

FIFTEEN WERE SUCCESSFUL FROM US.

## COMPETITIVE EXAMINATION (1908).

Douglas Scott, Kent Artillery.  
J. L. Longstaffe, 1st Lancashire R.F.R.A.  
D. G. Gunn, 3rd P.W.O. West Yorkshire Regt.  
A. L. Cooper Key, 5th Middlesex Regiment.  
W. C. Loder Symonds, Lancashire Fd. Artillery.

R. G. Atkinson, West Surrey Regiment.  
R. W. Leach, Cambridge Volunteers.  
A. Donaldson, Cambridge.  
G. W. Courtney, Cork R.G.A.  
N. L. H. Clarke, 3rd Bn. Lincolnshire Regt.



